

HARMONY  
AND  
INSTRUMENTATION

BY  
OSCAR COON

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# HARMONY AND INSTRUMENTATION.

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THE

# PRINCIPLES OF HARMONY

With Practical Instruction in Arranging Music for

ORCHESTRAS  MILITARY BANDS.

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BY OSCAR COON.

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CINCINNATI, OHIO:  
PUBLISHED BY A. SQUIRE, 216 ELM STREET,  
1883.

To my Esteemed Friend, Carlo Alberto Cappa,  
Bandmaster 7th Regiment National Guards,  
State of New York, this Volume is Cordially  
Inscribed.       \*       \*       \*       Oscar Coon.

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# PREFACE.

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This work is divided into three parts: Part I contains an outline of the Principles of Harmony, Part II treats of the large and small stringed Orchestra, and Part III of the Brass, Small Reed, and full Military Band.

It is, of course, an utter impossibility to treat, fully, each of these grand departments of music in a book of two or three hundred pages. A volume of the present size could be profitably devoted to each of the three parts. Many details had of necessity to be omitted, while many were barely touched upon in consequence of our limited space. We have endeavored, however, to point out the most important features, and put the student in the way of finding out the thousand and one details for himself. *How to proceed* has been shown as briefly as possible, trusting to the student's wit, to "take up the cue" and follow the subject to the end.

It is not pretended that this book will supply a complete musical education, or enable those who read it to compose and arrange music. *Some* musical ability is necessary on the part of the student. Great care has been taken to explain the examples in the clearest and simplest language possible—with what success we leave the reader to determine. And here we would suggest, that only by a thorough comprehension of the examples can any progress in the study of Harmony or Instrumentation be attained. *Vague ideas* are not sufficient; the student must become so familiar with the case in point that he can communicate his ideas to others clearly.

In compiling this volume the writer has drawn largely upon the following works: RICHTER'S MANUAL OF HARMONY, WEBER'S THEORY OF MUSICAL COMPOSITION, MARX'S MUSICAL COMPOSITION, BERLIOZ'S MODERN INSTRUMENTATION AND ORCHESTRATION, PROUT'S INSTRUMENTATION, STAINER AND BARRETT'S DICTIONARY OF MUSICAL TERMS, GROVE'S DICTIONARY OF MUSIC AND MUSICIANS, and several works of minor importance.

In the preparation of Part I the general plan of Richter has been followed as to the development of Harmony, and an attempt has been made to show its application to the harmonization of melodies.

The author is especially indebted to Berlioz's invaluable work for much of the information contained in Part II, and without which an immense amount of painstaking labor and inquiry would have been necessary.

Whatever of shortcoming may be found in Part III may be laid at the door of the author (if any one can conceive of an author possessed of a door, much less a house to hang it on), most of it being original matter. No credit is claimed for said originality, as there are no books of authority on Brass and Reed Bands from which to make "extracts"; therefore, the very natural desire to save trouble by appropriating the ideas of others, could not be gratified, and we were compelled to "do or die." If, however, the student shall succeed in extracting the information he desires from the bewildering mass of material in this book, or be stimulated by it to strive for greater excellence in the art of music, the author will feel that the care and labor bestowed upon this work has not been in vain.

OSCAR COON.

NEW YORK, January, 1883.



# PRINCIPLES OF HARMONY.

## Introduction.

It is taken for granted that those intending to pursue the study of Harmony have already made themselves acquainted with the elements of Music, as no one can expect to take up grammar before knowing how to read. A knowledge of the Scales—Major and Minor—and their signatures is absolutely necessary. The examples occurring in this work should be transposed to different keys, so as to become familiar with the subject in all its bearings. The keys of C major and A minor are chosen for the illustrations in order to avoid too many accidentals. Without further preliminary remarks we will begin by endeavoring to explain the construction of

## The Diatonic Major Scale.

The DIATONIC MAJOR SCALE consists of seven tones, or degrees, and the 8th, or octave, from the first degree. These degrees succeed each other by steps and half-steps in the following manner: From the 1st to the 2nd degree is one step; from the 2nd to the 3rd a step; from the 3rd to the 4th a half-step; from the 4th to the 5th a step; from the 5th to the 6th a step; from the 6th to the 7th a step; from the 7th to the 8th a half-step, thus:—

Degrees: 1 2 3 4 5 6 7 8

Steps: Step Step  $\frac{1}{2}$  Step Step Step Step  $\frac{1}{2}$  Step

This Scale, beginning on C, is called the *Natural* or *Normal* Scale. We take it for our model, and construct Scales in *other keys*; that is, Scales beginning on other tones than C. Let us form a Scale commencing with the fifth degree (*g*) of our model:—

Degrees: 1 2 3 4 5 6 \* 7 \* 8

Steps: Step Step  $\frac{1}{2}$  Step Step Step  $\frac{1}{2}$  Step Step

Wherein does this Scale differ from the model? The steps and half-steps occur in the proper places as far as the 6th degree, but from the 6th to the 7th degree (*e* to *f*) a *half-step* appears, where a *step* is wanted, and from the 7th to the 8th degree (*f* to *g*) is a *step*, where a *half-step only* is required. To cure this defect it is necessary to raise the seventh degree (*f*) a half-step, by placing a sharp before it, with the following result:—

Degrees: 1 2 3 4 5 6 7 8

Steps: Step Step  $\frac{1}{2}$  Step Step Step Step  $\frac{1}{2}$  Step

The student should write out Scales on other degrees, always starting on the fifth degree of last Scale, and ascertain for himself, in the manner shown above, which tones are to be raised. This process—forming new Scales on the 5th degree—will bring only keys with sharps. Let us, as an experiment, start a Scale on the *fourth* degree (*f*) of our model:—

Degrees: 1 2 3 \* 4 \* 5 6 7 8

Steps: Step Step Step  $\frac{1}{2}$  Step Step Step  $\frac{1}{2}$  Step

Here the difficulty is between the 3rd and 4th, and 4th and 5th degrees. The distance is *too great* from A to B, and *too small* from B to C. Lower the tone B, by making it B $\flat$ , and the difficulty is removed:—

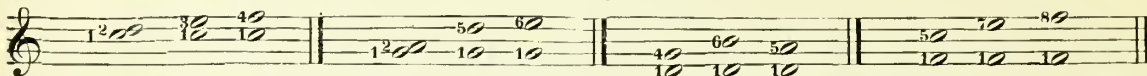
Degrees: 1 2 3 4 5 6 7 8

Steps: Step Step  $\frac{1}{2}$  Step Step Step Step  $\frac{1}{2}$  Step

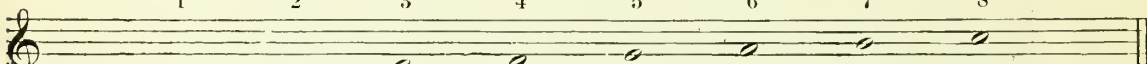
A Scale should next be written on the *fourth* degree of the Scale of F, which will give a Scale in the key of B $\flat$ , and so on until seven flats have been reached.

## Intervals.

The relation of two tones with regard to *pitch*, the difference between tones of a higher or lower degree, is called an *interval*. The interval, or distance, between two tones, is determined by the number of degrees lying between them. Thus, if we have the tones C, D, we reckon C as standing on the 1st, and D on the 2nd degree, and call it the interval of a *second*; if we have C, E, we reckon C as on the 1st, and E on the 3rd degree, and call it the interval of a *third*. The interval is named from the *degree upon which the higher tone stands*, always reckoning the *lower tone* as on the 1st degree, thus:—

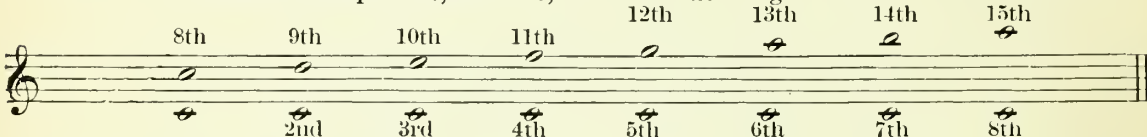


The intervals resulting from the major Scale, always counting from the 1st degree, are seen below:—



Unison, or *Prime*. *Second*. *Third*. *Fourth*. *Fifth*. *Sixth*. *Seventh*. *Eighth*, or *Octave*.

Tones more than an octave apart are, as a rule, reduced to their original names in the first octave:—



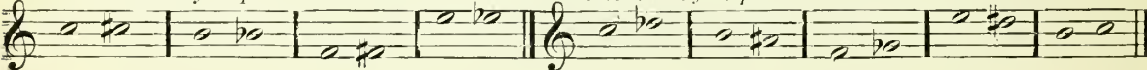
The *smallest* interval is the half-step. A *step* may be divided into two half-steps by raising or lowering the first tone by an accidental:—



Half-steps are of two kinds, *Chromatic* and *Diatonic*. *Chromatic half-steps* are those which remain on the same degree; as C, C $\sharp$ ; B, B $\sharp$ . *Diatonic half-steps* are those which move to the *next* degree above or below; as C, D $\flat$ ; B, A $\sharp$ .

*Chromatic half-steps.*

*Diatonic half-steps.*



## Chromatic Alteration of Intervals.

The intervals which we have obtained from the major Scale, are capable of *Chromatic* alterations of the upper, as well as of the lower tones. These alterations will not change the names we have given them, but will make it necessary to distinguish between the different *kinds*. For example, from C to G is a *fifth*. If a sharp or a flat is placed before the G, it is still a fifth, but a *different kind* of fifth:—

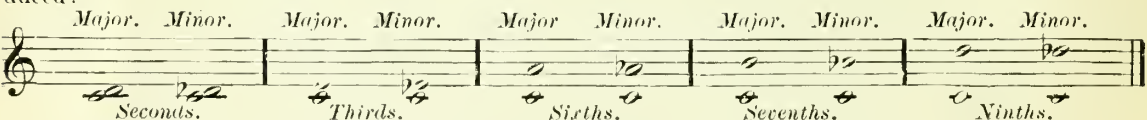


The following rules should be committed to memory:—

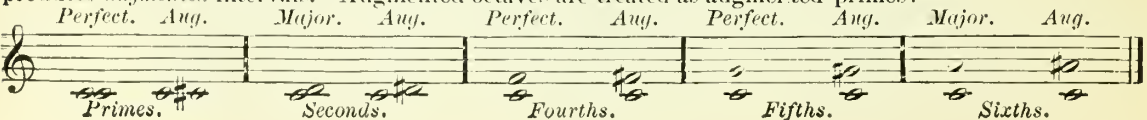
1. *Seconds, thirds, sixths, sevenths and ninths*, counting upward from the *first degree* of the major Scale, are called *major intervals*; *primes, fourths, fifths and octaves*, are called *perfect*:—



2. By lowering the upper tone of a *major interval* a *chromatic half-step*, a *minor interval* is produced:—



3. Raising the upper tone of *major seconds, major sixths* and the *perfect intervals* a *chromatic half-step*, produces *augmented intervals*. *Augmented octaves* are treated as *augmented primes*:—





4. Raising the *lower* tone of *minor thirds* and *sevenths*, and the *perfect* intervals a chromatic half-step, produces *diminished* intervals:—



Augmented thirds, sevenths and ninths are not used in *harmonic* combinations.

## Table of Intervals in General Use.



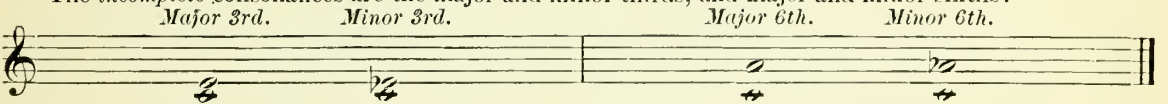
Intervals are divided into two classes, *Consonances* and *Dissonances*. *Consonances* are those which do not require a further progression, but give a satisfying effect when standing by themselves. *Dissonances* demand further progression, or connection with other intervals to give satisfaction.

## I Consonances.

Consonances are *complete* and *incomplete*. The *complete* consonances are the perfect prime, perfect fourth, perfect fifth and perfect octave:—



The *incomplete* consonances are the major and minor thirds, and major and minor sixths:—



## II Dissonances.



## Inversion of Intervals.

An interval is *inverted* when the *upper* tone is transposed an octave lower, so that the *former lower* tone becomes the *upper* tone, thus:—

Original.	Inverted.	Original.	Inverted.	Original.	Inverted.
Perfect 5th.	Perfect 4th.	Major 6th.	Minor 3rd.	Major 2nd.	Minor 7th.

Or, if the lower tone is placed above the upper tone, an inversion takes place, thus:—

Original.	Inverted.	Original.	Inverted.
Perfect 4th.	Perfect 5th.	Minor 3rd.	Major 6th.

In short, turning an interval “*upside down*” is an *inversion*. PERFECT intervals always remain PERFECT when inverted, but major intervals become minor, minor major, augmented diminished, and diminished augmented.

The following intervals, viz: 1sts, 2nds, 3rds, 4ths, 5ths, 6ths, 7ths, 8ths, become, when inverted, 8ths, 7ths, 6ths, 5ths, 4ths, 3rds, 2nds, 1sts.

## Table of Inversions.

Original Intervals	PRIMES.	Perfect.	Aug.	Major.	SECONDS.	Minor.	Aug.
Inverted.	OCTAVES.	Perfect.	Diminished.	Minor.	SEVENTHS.	Major.	Diminished.
	THIRDS.	Major.	Minor.	Diminished.	FOURTHS.	Perfect.	Aug.
	SIXTHS.	Minor.	Major.	Augmented.	FIFTHS.	Perfect.	Augmented.
	FIFTHS.	Perfect.	Aug.	Dim.	SIXTHS.	Major.	Aug.
	FOURTHS.	Perfect.	Diminished.	Augmented.	THIRDS.	Minor.	Diminished.
	SEVENTHS.	Major.	Minor.	Dim.	OCTAVES.	Perfect.	Dim.
	SECONDS.	Minor.	Major.	Augmented.	PRIMES.	Perfect.	Augmented.

Exercises in intervals, in all keys and in the inversions, should be practiced diligently, until they can be named instantly, no matter in what key or position they may be found. Unless the theory of intervals is thoroughly understood, no progress can be made in the study of *Harmony*.

## PART I.

## HARMONY.

### CHAPTER I.

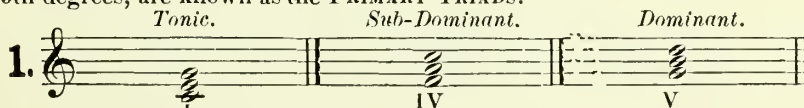
### THE HARMONIES OF THE MAJOR SCALE.

**MELODY** is a succession of *single tones*. **HARMONY** is a combination of two or more tones *sounding at the same time* according to certain rules. **THE THEORY OF HARMONY** teaches the construction of chords and their connection with one another. Having learned the formation of the major scale, let us endeavor to find harmonies, or chords with which to accompany its different tones. If we take the first tone (C) and the second (D) in connection with it, we find the result is not very agreeable to the ear; we next try C with the third degree, E, and find it satisfactory. Now sound C and E together and try to discover another tone which will harmonize with them. F sounded with C-E produces discord, but the next tone above (G) will answer our purpose. We have now a combination of three tones, which is called a **TRIAD**. C is the *fundamental*, E the *third* and G the *fifth*. This triad, formed on the *first degree*, is called the **TONIC TRIAD**.

We will next take the fifth of this triad (G), and apply the same process as before. The first tone above G which will satisfy us is B, a *third* above G, and the next above B is D, a *fifth* above G. Here is another triad in all respects like the tonic triad. This triad, situated on the *5th degree*, is called the **DOMINANT TRIAD**.

As the *fifth* of the tonic triad (g) has served as *fundamental* for the dominant triad, why not let the *fundamental* of tonic (c) serve as *fifth* to a triad? A triad with C as fifth would have F for its fundamental, and consequently A as its third. This triad is situated on the *4th degree*, and is called the **SUB-DOMINANT TRIAD**.

We have now triads with *major thirds* and *perfect fifths*, which are called *major triads*. Those upon the 1st, 4th and 5th degrees, are known as the **PRIMARY TRIADS**.



N. B.—The Roman numerals (I, IV, V) will be used to indicate the degrees of the scale which serve as fundamental.

With these primary triads we can harmonize all the degrees of the scale, as every degree can be found in one or the other of them.

### APPLICATION OF THE TRIADS TO THE HARMONIZATION OF MELODIES.

In the following examples, the *four-voiced\** manner of writing will be adhered to:—

The *upper voice* we will call the *Soprano*; the next below, the *Alto*; the *lower voice* the *Bass*, and the voice next above the Bass, the *Tenor*. The Soprano and Bass are the *outer voices*, the Alto and Tenor the *middle voices*.

Chords should be regarded as representing the different voices, and *not* as a mere combination of tones; thus, the tonic triad with the fundamental (c) doubled, gives what is called the common chord of C:—



This chord would be distributed among the voices as follows: The Soprano would take the upper C, the Alto G, the Tenor E, and the Bass the lower C.

The following succession of chords:—



\*The term "four-voiced" does not apply to vocal music only, but to four separate or independent parts, whether played upon the piano or by different instruments. The examples in this work are for illustration only, and not intended for vocal use.



when written for voices in the form of a score, would present this appearance:—

Soprano.

Alto.

4. Tenor. \*

Bass.

Before attempting to harmonize melodies, it will be necessary to give our attention to the principles which govern the connection of chords. Not only must *each voice* move properly by itself, but its relations with *all the other voices* must be harmonious. To conduct the parts in this manner is called *pure voice-leading*. As the *triad* contains but *three tones*, one of them must be doubled when writing for four voices. The *fundamental* is most used for doubling, next the fifth and third.

A chord may appear in *Close or Open position*:—

*Close position.*

A.

*Open position.*

B.

In the course of our studies we shall have occasion to use both positions.

### MOVEMENT OF THE VOICES.

One voice can move with another in *Parallel Motion*, *Contrary Motion* or *Oblique Motion*.

If two voices rise or fall at the same time, *parallel motion* ensues, thus:—

5.

If one voice rises while the other falls, we have *contrary motion*, thus:—

6.

If one voice remains on the same tone while another rises or falls, *oblique motion* results:—

7.

\* The Tenor part of example(4) would have to be written an octave higher if sung by a tenor voice. As the highest male voice is an octave lower than the soprano, it follows that if the same tone is to be produced in both voices the tenor must be written an octave higher than the soprano. It is thought best, however, in writing out the scores, to give the tenor the same place on the staff which it occupies in the original chords or piano part, so that the student may not be embarrassed too much at first by having to transpose the part an octave lower (in his mind) in order to get the proper tone.

NOTE.—The treble and bass clefs will be used for the examples in this work. Clefs and their uses will be considered when treating of Instrumentation.



## PARALLEL OCTAVES AND FIFTHS.

Two voices are not allowed to proceed by *parallel motion*—either by steps or skips—from a perfect octave, or fifth, to a perfect octave, or fifth.

8.

Parallel Octaves. Parallel Fifths.

By Steps. By Skips. By Steps. By Skips.

Steps. Skips.

NOTE.—A STEP is from one degree to the NEXT ONE ABOVE OR BELOW; a SKIP is from one degree to another which lies at a greater distance.

The following examples contain both parallel octaves and fifths:—

9.

(a) (b) (c)

At (a) we find parallel octaves between Tenor and Bass, and parallel fifths between Soprano and Tenor; at (b) are octaves between Alto and Bass, and fifths between Tenor and Bass; at (c) octaves by skips between Soprano and Bass, and fifths between Alto and Bass. As these forbidden octaves and fifths occur only in parallel motion, they can be avoided by applying contrary or oblique motion. In Ex. 9, at (a), the Bass moves from F to G, and the Soprano from C to D, thus making parallel fifths. If the C in the Soprano be led downward to B (the third in the next chord), the result would be contrary motion between Soprano and Bass, and they would move from a fifth to a third, instead of from a fifth to another fifth. The other defect in the same example is between the Tenor and Bass; both move from F to G—an octave apart. The Soprano having resigned D for B—in the second chord—the Tenor can be led downward a third to D—the nearest tone in the next chord, thus producing contrary motion with the Bass. With these changes Ex. 9, (a), will stand as follows:—

10.

(a) (b) (c)

At (b), contrary motion has been applied. At (c) the Soprano, which before made a skip from C to F, (same as the bass) has been led to C in the next chord, thus producing *oblique motion* with the Bass, and forming a *close connection* between the two chords.

A tone occurring in both of two chords is called a *connecting tone*, and is, as a rule, to be given to the same voice, Ex. 10, (c).

We will now attempt to harmonize the following simple melody:—

11.

1 2 3 4 5 6 7 8

Here we have a melody of eight measures, which contains two sections or phrases of four measures each. The first four measures we call the "Thesis;" the last four the "Antithesis."

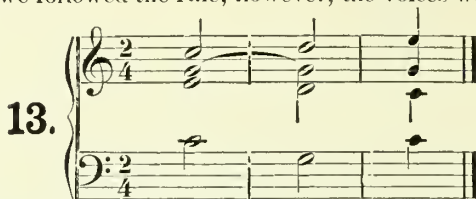
In selecting chords for a melody, those should be preferred which the ear recognizes as the most natural. The first tone of the above melody will of course be accompanied by the tonic harmony. The second tone—D—is contained—so far as we know at present—only in the dominant triad, of which it is the fifth. The Es in the 3rd measure belong to the tonic, as third. The D in the 4th measure closes the first phrase and must receive the dominant triad. The 6th measure will receive the sub-dominant, F being its fundamental. The remaining tones need no further remarks.

With the chords added to Example 11, we have the following:—

12.

I V I — V I IV I V I

The bass tones in the above are all *fundamentals*. The Roman numerals under the bass indicate the degree of the scale upon which the triad is built. The slurs show where the connecting tone is retained in the same voice. In the first measure the Alto takes G, and according to our rule, should take the G in the 2nd measure also. Had we followed the rule, however, the voices would have progressed thus:—



This leading of the Alto makes it necessary to carry the Tenor downward to D, and leaves the chord *without the third* (B), which is one of its most important intervals.

A clearer view of the progression of each voice in Ex. 12, can be had when written out in score:—

14.

The figures over each note indicate the interval of the chord. It will be seen that the only interval which has been doubled in any of the chords, is the fundamental (1). The chord in the last measure lacks the fifth (*g*), which is caused by the tenor moving to E. The Alto moves from B to C, which is the natural progression of the 7th degree of the scale. This tone is called the *LEADING TONE*, and strives upward to the tonic. It could, however, have been led downward to G in the above instance, as it is in a *middle voice*, but in cases where it is in the upper voice the effect is not good, thus:—

15.

If the *leading tone* (7th degree) *descend*, the Bass should *ascend* (contrary motion).

The chords we have had to connect (Ex. 12.) so far, have had *mutual tones*. These tones make the connection smoother and bind the chords together. Chords which have *no mutual tone*, are more difficult to connect naturally, and parallel octaves and fifths creep in. It will be well to remember the following: Triads built upon fundamentals which *skip a fourth or fifth*—in either direction—have *ONE mutual tone*; those upon fundamentals which *skip a third or sixth*, have *TWO mutual tones*; those upon fundamentals which *move by a step*, *no mutual tone*, e. g.:—

16.

Whether a fundamental *ascends a fourth* or *descends a fifth*, the result is the same, *fundamentally*.

To compensate for the lack of a connecting tone between triads which progress *fundamentally by a step*, it is necessary to lead the voices in *contrary motion*. Voices working in contrary motion cause an agreeable effect, and the want of connection is not felt. See Ex. 10, *a, b*. Alterations of the last four measures of No. 11, will bring the Sub-Dominant and Dominant together, in which case we have no connecting tone. In the following examples the alterations have been made and the harmony added. The + indicates where contrary motion has been applied:—

17.

IV V IV V IV V IV V

Of the above examples the one at (c) would be most likely to prove troublesome to a beginner. The movement of the Soprano from A to B, and the Bass from F to G we are not at liberty to change; both ascend, consequently the Alto and Tenor *must descend* to avoid fifths and octaves. Had the Alto been led from F to G, octaves with the Bass would have resulted, and had the Tenor moved from C to D, fifths with the Bass would have appeared. The Tenor might have gone from C to B, but then the *leading tone* would have been *doubled*, which at present we desire to avoid. The drift of the voices has caused this example to end in *open position*.

As a rule, when the triad of the Sub-Dominant is followed by that of the Dominant (IV to V), the voices should be led *downward against the Bass*.

## SECONDARY TRIADS OF THE MAJOR SCALE.

Thus far, the only triads with which we have become acquainted, are those situated on the 1st, 4th, and 5th degrees of the scale. Others, called *Secondary Triads*, can be formed on the remaining degrees, thus:—

18.

II III VI VII°

The triads on the 2d, 3d, and 6th degrees, have *minor thirds* and *perfect fifths*, and are called *minor triads*. The triad on the 7th degree, has a *minor third* and a *diminished fifth*, and is called a *diminished triad*.

The complete scale, with the triads of each degree, is shown below:—

19.

I II III IV V VI VII°

NOTE—The large numerals indicate MAJOR TRIADS, the small MINOR, and a ° after a numeral a DIMINISHED TRIAD.

A change in our original melody (Ex. 11) will enable us to introduce all the triads we have discovered, with the exception of the diminished triad, which is not much used:—

20.

I II III IV V VI VII I

In the first measure the tonic triad will always serve us best, as it is the best indication of the key; the 2nd measure can carry the triad of the third degree, as B is the fifth of the triad; the 3rd, 4th, and 5th measures present nothing new; the 6th measure will take the triad of the sixth degree—C being its third—and D in the 7th measure, can stand as fundamental to the triad of the 2nd degree. The fundamental of each chord will be given to the Bass:—

21.

I II III IV V VI VII I

From the 1st to the 2nd measure, the fundamental makes the skip of a third, and two connecting tones result, which are given to the Alto and Tenor; from III to IV the fundamental moves by a degree, and all the voices descend against the Bass. The connecting tone from the 3rd to the 4th measure is G, but as the Soprano goes from G to D, the Alto goes from E to G, and the Tenor to B. Supposing the Alto had been led upward to B, and the Tenor to G; each voice would have made a skip upward of a perfect fifth, thus:—

22.

I II III IV V VI VII I



giving *parallel fifths* between Soprano and Tenor. In the 5th measure (Ex. 21) the open position, which we were forced to take in the previous chord, is retained; for had we returned to close position, all the voices would have been obliged to descend from the 5th to the 6th measure, thus:—

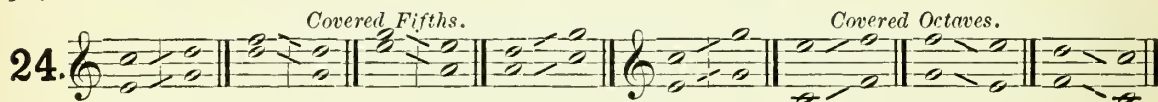


which would give *octaves* between Alto and Bass, and *fifths* between Tenor and Bass. From the 5th to the 6th measure the fundamental descends a third, and there are two connecting tones, *c-c* and *e-e*, but the motion of the Soprano and Bass made it impossible to retain the tones in the same voices. The triad of the 2nd degree (7th measure) is usually followed by that of the 5th degree, and is often used instead of the Sub-Dominant. The different intervals of the chord should be led downward in contrary motion to the Bass, in the same manner as the Sub-Dominant is treated.

### COVERED FIFTHS AND OCTAVES.

A *covered fifth* results from the progression of two voices in parallel motion, from any interval, to a perfect fifth.

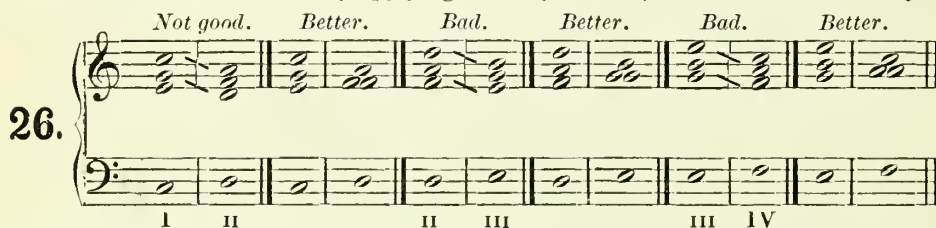
A *covered octave* results from the progression of two voices in parallel motion, from any interval, to a perfect octave.



Covered octaves and fifths are not objectionable when occurring between *primary triads*. Covered octaves in which the upper voice progresses a *whole step*, are to be avoided:—



Covered fifths should be avoided by applying contrary motion, when the bass moves by degrees:—

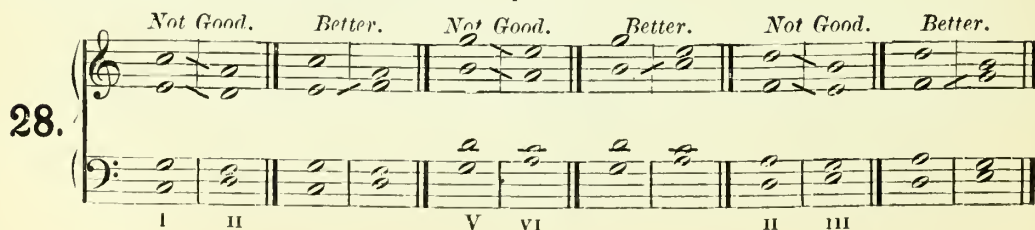


In cases like the above it is preferable to double the third, rather than make covered fifths. If the third should chance to be the *leading tone*, it should not be doubled, thus:—



See Ex. 17, (a), second to the third measure.

In open position these fifths become still more prominent:—



## CHAPTER II.

## HARMONIES OF THE MINOR SCALE.

Three forms of the *Minor Scale* are in use, viz:—

29. *No. 1.*

1 Step.  $\frac{1}{2}$  Step. Step. Step.  $\frac{1}{2}$  Step.  $1\frac{1}{2}$  Step.  $\frac{1}{2}$  Step.

30. *No. 2.*

31. *No. 3.*

The first is the one we shall adopt for *Harmonic purposes*; the other two are used for *melodic forms*.

It will be seen that there are whole steps between the 1st and 2nd, 3rd and 4th, and 4th and 5th degrees; half-steps between the 2nd and 3rd, and 7th and 8th; and a *step and a half* between the 6th and 7th degrees. As the *same signature* serves for both the major and its relative minor, it will be necessary to *raise* the 7th degree of the minor scale by an accidental, to qualify it for the *leading tone*, which in minor as well as major must be but a half-step below the tonic. We can build triads on all the degrees of the minor scale:—

32.

I II° III# IV V VI VII°

The 1st and 4th degrees carry *minor triads*; the 2nd and 7th *diminished triads*; the 5th and 6th *major triads*; and the 3rd an *augmented triad*.

The *primary triads* are those on the 1st, 4th and 5th degrees—the same as in the major scale. In the minor mode, the *Tonic* and *Sub-Dominant* are *minor chords*, but the *Dominant* is a *major triad* in both modes. It will be remembered that the *leading tone* (7th degree) is also the *third* in the *Dominant Triad*, and the 7th degree having been raised by an accidental will cause the *Dominant* to appear as a *major triad*.

The triad of the 3rd degree presents something new for consideration. Its peculiarity is due to its *augmented fifth*—from which it takes its name. It is but little used as the triad of the 3rd degree in minor, but is often met with in major as an “*altered chord*”—major triad with its fifth raised—in which case the raised interval proceeds to the next tone above:—

33.

C: I — IV C: V — I

This chord will be noticed hereafter among the *chromatically altered chords*.

A transposition of our first melody a minor third lower, will bring it in the key of A minor—the relative minor of C major—and give us an opportunity to practice the application of the *primary triads* in the minor mode:—

34.

a. I V I — V I IV I V I

The numerals indicate the triads to be used. The 2nd measure will receive the dominant triad, the *third* of which (*y*) must be raised by a # to make it major:—

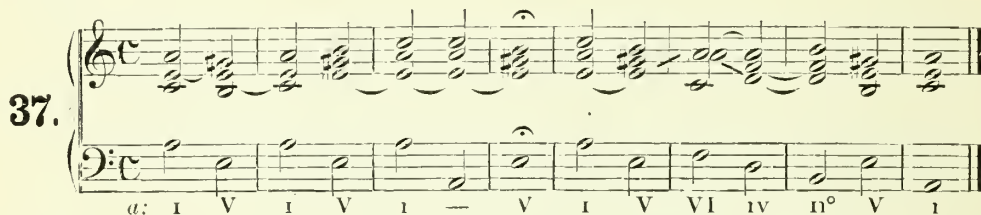
35.

a. I V I — V I IV I V I

A variation of our melody will be necessary, that the secondary triads may receive treatment. The following will answer the purpose:—



Of the secondary triads in minor, only those of the 6th and 2nd degrees are indicated above. The triad of the 2nd degree is much used in both the major and minor mode at the *close*. Different kinds of close will be explained later.



The first four measures require no remarks, but from the 5th to the 6th measure, the Alto is led from C# to A. Why not lead it from G# to F? For the reason that it would be the step of an augmented second, and augmented intervals are to be avoided when possible, as unmelodious. If both tones belong to one chord they may be allowed, thus:—



In the 7th measure (No. 37) the triad of the second degree is treated the same as in the major mode—the voices being led downward against the Bass. The progression from the 2nd to the 5th (II° to V) should never be written thus:—



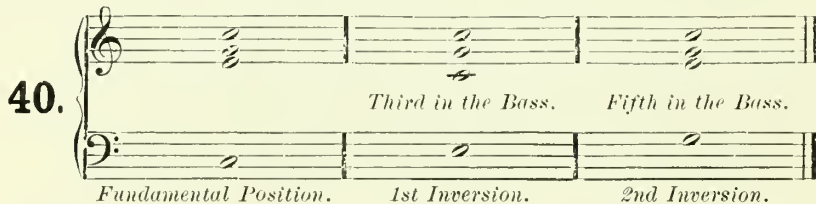
as it causes covered octaves between Tenor and Bass, and the step of an augmented second in the Alto.

The student will get a clearer idea of the progression of the voices, by writing Example 37 in score.

### CHAPTER III.

#### INVERSIONS OF THE TRIADS.

In all our former examples, the basses have been the fundamentals of chords, and have progressed mostly by skips. All the other voices have been permitted to take any interval of the chord which seemed best to make them flow naturally. There is no reason why the Bass should not have the same privilege so that it may also flow more smoothly. When the Bass takes *any other interval* than the fundamental, the chord is said to be *inverted*. If the Bass be given the *third of the chord*, it is called the *first inversion*, or CHORD OF THE SIXTH. If the Bass be given the *fifth*, it is called the *second inversion*, or CHORD OF THE SIXTH AND FOURTH.



The Thorough Bass figuring for the 1st inversion would be  $\frac{6}{4}$ , or simply 6, and indicates that the *fundamental* of the chord is a SIXTH above the Bass.

For the second inversion the figures are  $\frac{6}{4}2$ , and denote that the *fundamental* is a FOURTH above the Bass:—



41.

We can best illustrate by returning to our old melody at No. 12, and compare it with the following arrangement where the inversions are introduced:—

42.

Figured Bass: C: I V I - V I II I V I

In the 3rd measure, the *Bass* takes the third of the chord which the *Soprano* resigns for C. In the 7th measure the *Bass* has the fifth of the chord—which is also given to the *Alto*—while the *Soprano* has the fundamental, and in the next chord after, the *Bass* receives the fundamental. When there are no figures over the *Bass* note, it is understood that the chord is in the fundamental position.

The following example (second chord of the 2nd measure) gives an opportunity to introduce the triad of the 7th degree. The Bass takes the *third* of the chord and descends to C, while the other voices ascend. The triad of the 7th degree is usually followed by the tonic harmony:—

**43.**

The musical score for exercise 43 consists of two staves. The treble staff contains a series of chords: C major triad, D minor triad, E minor triad, F major triad, G major triad, A major triad, B major triad, and C major triad. The bass staff contains a series of single notes: C, D, E, F, G, A, B, and C. Below the bass staff is the figured bass notation: C: I - IV viii° I - V I V I IV I V I.

Compare No. 37 with the following exercise, and the manner of using the inversions will be readily understood. More care is necessary to prevent parallel octaves when the inversions are applied, in consequence of the movement of the Bass by degrees instead of skips. After the 1st measure the harmony is forced into *open position* by the drift of the Soprano and Bass, and for the same reason is led back to *close position* in the 6th measure:—

44.

Figured bass line: a: 1 V I V I — V̇ I V VI IV II° V I

When accidentals appear after thorough-bass figures, as in the 1st and 2nd measures of Ex. 44, the interval which the figure indicates is to be raised or lowered—as the case may be—a chromatic half-step. An accidental placed *over a bass note* (without figures) has reference to the *third*; thus a  $\sharp$  placed over E denotes that the third above (g) is to be G $\sharp$ . See measures 4th and 7th in the above exercise. Sometimes a dash is made through a figure thus, 6 or 4, *instead of* placing a sharp after it.

45. *Effect.*

*Written*

## CHAPTER IV.

## THE DOMINANT CHORD OF THE SEVENTH.

A chord of the seventh is formed by adding another tone to the triad, which tone must form a *seventh* to the fundamental. The most important of the Seventh chords is that of the Dominant, and is called the **PRIMARY CHORD OF THE SEVENTH**. It is formed by adding a *Seventh* to the Dominant Triad, and is the same in both major and minor mode:—

46. C Major: Dom. Triad. Dom. 7th. C Minor: Dom. Triad. Dom. 7th.

C: V V7 c: V V7

The Dominant Chord of the Seventh is naturally followed by the tonic harmony. When this is the case the chord is said to have its *regular resolution*.

47. C Major. C Minor. A Minor.

C: V7 1 c: V7 1 a: V7 1

The *seventh* descends one degree, the *fundamental* skips upward a fourth or downward a fifth, the *third* (leading tone) ascends one degree, and the *fifth* may either ascend or descend by a degree. This is called the **CLOSING CADENCE**. We can introduce the chord of the seventh in the 7th measure of Ex. 42, by leading the Tenor from E to F, instead of E to D:—

48.

I V7 I

This resolution leaves the Dominant Chord without its fifth (*d*), which will often be the case in four-part writing. The other intervals are too important to be omitted. Ex. 43 would give the following close with the Dominant seventh introduced:—

49. (a) 7th in Alto. (b) (c) 7th in Tenor.

I V7 I I V7 I I V7 I

At (a) and (b) the last chord is without its fifth. This could not be avoided without spoiling the *natural flow* of the voices. At (c) the last chord is complete, and the seventh chord has had all its intervals represented by the Tenor moving from D to F. Nothing additional need be said in regard to the treatment of the chord of the seventh in minor. The same progression of the intervals will take place as in major.

No. 35 would end like the following with the Dominant 7th applied:—

50. 7th in Tenor. or:

a: I V7 I I V7 I



No. 37 would give the following endings:—

7th in Tenor. or: or 7th in Alto.

51.

a: 11° V7 I 11° V7 I 11° V7 I

## CHAPTER V.

### INVERSIONS OF THE DOMINANT CHORD OF THE SEVENTH.

Three inversions are possible with the Seventh Chords. In the 1st inversion the Bass receives the *third* of the chord; in the 2nd, the *fifth*; and in the 3rd, the *seventh*.

The 1st inversion is called the CHORD OF THE SIXTH AND FIFTH, and the thorough-bass notation is  $\frac{6}{5}$ , the most important intervals from the Bass being the sixth and fifth:—

The 2nd inversion is called the CHORD OF THE SIXTH, FOURTH AND THIRD. The thorough-bass figures are  $\frac{6}{4}$  or  $\frac{4}{3}$ .

The 3rd inversion is called the CHORD OF THE SIXTH, FOURTH AND SECOND. The figures  $\frac{6}{2}$  or  $\frac{4}{2}$  or 2.

Below will be found the *full* figuring over the Bass, as well as that usually written in an abbreviated form. The figures *after* the notes in the upper stave show the intervals *from* the Bass, and are identical with those over it:—

52.

Fund. Position. 1st Inversion. 2nd Inversion. 3rd Inversion.

We can show how to use the inversions by introducing a seventh chord in the 2nd measure of No. 42. Compare the following with the original:—

53.

V7 1st Inv. 2nd Inv. or 3rd Inv.

Compare No. 43 with the following:—

54.

C: 1 — IV V7 1 — V 1 V7 1 IV 1 V7 1

In the 2nd measure the seventh, which appears in the Bass, is "prepared" by having had the same tone in the previous chord. Compare No. 44 with the following:—

55.

a: I V7 I V7 I V I V7 V1 IV II° V7 I

2nd Inv. 3rd Inv. 1st Inv.

It is unnecessary to say more regarding the inversions of the Dominant Chord of the Seventh—only to remember that in the inversions as well as in the fundamental position, the *original seventh* must resolve one degree downward; the *original third* (leading tone) must ascend one degree, unless in a middle voice, when it may descend if the Bass ascends; the fundamental may ascend a fourth or descend a fifth, or may remain as fifth of the next chord; the fifth may either ascend or descend.

## CHAPTER VI.

### SECONDARY CHORDS OF THE SEVENTH.

By the addition of a Seventh of the fundamental, Chords of the Seventh can be formed from the remaining triads of the Major and Minor Scale which are called *Secondary Chords of the Seventh*:—

In Major.

56.

In Minor.

57.

The limits of this work will not permit us to notice all these secondary chords of the Seventh, many of which are seldom, or never, used in practice as fundamental harmonies. The student who desires to go further in this direction is referred to Richter's *Manual of Harmony*, where he will find the various chords of the Seventh fully and clearly discussed. The only secondary chords of the Seventh to which we will give attention are those of the 2nd and 7th degrees in major, and 2nd and 7th degrees in minor. These are often employed, especially that of the 7th degree in minor—the chord of the diminished seventh.

By reference to Ex. 56, it will be seen that the 2nd degree of the major scale bears a *minor triad* with a *minor seventh*. It is often found at the close in the same situation as the *triad* of the 2nd degree. When introduced, it must be in such a way that the seventh (dissonant tone) has appeared in the previous chord in the same voice, and as a concord or harmonic tone, thus:—

58.

Prep. Discord. Resolution.

C. IV II7 V

The C in the first chord is called the *preparation*; the next C is the *dissonance*, and the following B, the *resolution*. This operation is called the *preparation and resolution* of a discord. A few examples will be sufficient to illustrate the working of this chord:—

59.

or minor—have the same natural tendency as the *triad* on the same degree, to resolve *downward* against the *upward* motion of the Bass. An exception occurs in the progression  $\text{II}^{\circ}7$  to  $\text{V}7$  where the *third* of the first chord is carried over and serves as *seventh* in the next. Compare first and second examples of No. 59.

60. *7th in Soprano:* *7th in Alto:* *7th in Tenor:*

*a:*  $\text{IV}$   $\text{II}^{\circ}7$   $\text{V}7$   $\text{I}$        $\text{V}7$   $\text{II}^{\circ}7$   $\text{V}7$   $\text{I}$        $\text{IV}$   $\text{II}^{\circ}7$   $\text{V}7$   $\text{I}$

The first inversion of this chord is the one most used:—

*In Major.*

61.

$\text{C:}$   $\text{V}7$   $\text{II}7$   $\text{V}$   $\text{I}$        $\text{I}$   $\text{II}7$   $\text{V}$        $\text{IV}$   $\text{II}7$   $\text{V}$   $\text{I}$

*In Minor.*

62.

*a:*  $\text{I}$   $\text{II}^{\circ}7$   $\text{V}$   $\text{I}$        $\text{V}7$   $\text{II}^{\circ}7$   $\text{V}$   $\text{I}$        $\text{I}$   $\text{II}^{\circ}7$   $\text{V}$   $\text{I}$        $\text{V}7$   $\text{II}^{\circ}7$   $\text{V}$   $\text{I}$

## CHORD OF THE SEVENTH OF THE 7th DEGREE IN MAJOR.

Little space can be given to this chord. It is a *diminished triad* with a *minor seventh*. Some authors treat it as a chord of the dominant seventh with an added ninth:—

63.

$\text{C: V}9$

This combination is often heard, and the 9th is usually resolved to the octave of the fundamental:—

64.

$\text{C: V}9-8$

The *natural* resolution of the chord is this:—

65.

Its fundamental being the *leading tone*, strives upward to the tonic; the seventh descends, and the third must ascend or make parallel fifths with the descending seventh:—

66.

Inversions are possible with this chord:—

67.

*Seldom.* *(a.)*

$\text{C:}$   $\text{VII}^{\circ}7$   $\text{I}$        $\text{IV}$   $\text{VII}^{\circ}7$   $\text{III}$

Compare the chord at (a) with the second chord of No. 62.



## THE CHORD OF THE DIMINISHED SEVENTH.

This much used and much abused chord is situated on the 7th degree of the *minor* scale. Its natural resolution is to the tonic. The fundamental (leading tone) ascends one degree to the tonic; the seventh descends a degree; the fifth descends a degree and the third ascends. In some positions the third may descend (when it lies above the seventh), as at (a) and (b).

68. *Natural Resolution.* (a.) (b.) *Not Good.*

a: vii°7

Below are the inversions:—

69. *Not:*

a: vii°7 1

The Chord of the Diminished Seventh *requires no preparation*. It can be introduced in Nos. 55, 2nd and 5th measures, in place of the Dominant Chord, with the following result:—

70.

a: vii°7 vii°7

## CHAPTER VII.

## DECEPTIVE CADENCES.

It has been considered necessary, so far, to resolve the seventh of a chord one degree downward. In the case of the dominant chord of the seventh (as well as in other seventh chords), the ear expects the *regular cadencing progression* to take place; that is, the fundamental to ascend a fourth, or descend a fifth, and the seventh to descend a degree. It is possible for the fundamental to progress in such a way that the ear will be disappointed, and the seventh instead of descending will remain stationary, or ascend.

When the dominant chord of the seventh is followed by *any other chord than the tonic*, a *deceptive cadence* results.

To give all the cases where this can take place would be impossible, as well as unnecessary, but a few of the most usual will be given, and the student is again referred to Richter's work, where a large number of examples will be found.

The dominant chord of the seventh may be followed by the *triad of the sixth degree*, when the seventh will descend.

71. *In Major.* *in Minor.*

C: V7 VI a: V7 VI

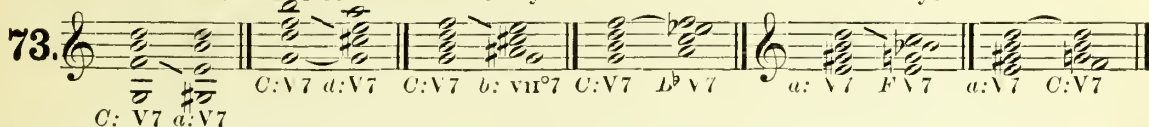
This progression is often found. See Nos. 37 and 55, fifth to sixth measures.

By the triads of the third, second and fourth degrees.

72. *7th descending.* *Seventh stationary.* *2nd degree.* *4th degree.* *4th degree in minor.*

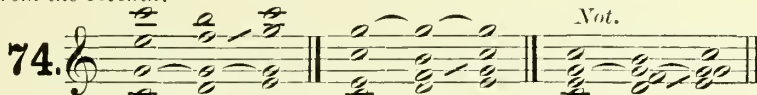
C: V7 III C: V7 II C: V7 IV a: V7 IV

The Dominant Chord of Seventh followed by Chords of the Seventh of other keys:—

73. 

C: V7 a: V7

The upward progression of the seventh can occur as follows, the fundamental remaining stationary, and at a distance from the seventh:—

74. 

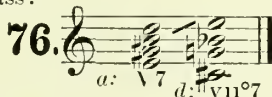
Not.

Or by chromatic alteration of the seventh:—

75. 

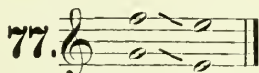
Often heard.

Or with contrary motion of the Bass:—

76. 

a: V7 d: vii°7

A descent of the Bass by a third, makes the downward resolution of the seventh impossible on account of the objectionable covered octave.

77. 

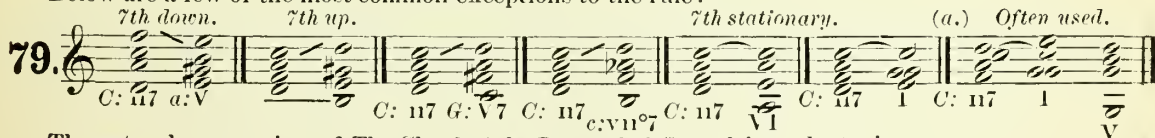
With such a progression of the Bass the seventh must be led upward:—

78. 

C: V7 I a: V7 I

The Secondary Chords of the Seventh can also progress so as to form deceptive cadences. For want of space our examples will have to be confined to the secondary seventh chords of the 2nd degree in major, and the 2nd and 7th degrees in minor. The regular progression of the seventh chord of the 2nd degree—in major or minor—is to the chord of the 5th degree: in major ii7 to V, or ii7 to V7; in minor ii°7 to V, or ii°7 to V7.

Below are a few of the most common exceptions to the rule:—

79. 

7th down. 7th up. 7th stationary. (a.) Often used.

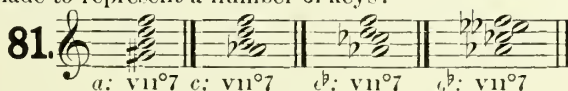
C: ii7 a: V C: ii7 G: V7 C: ii7 C: vii°7 C: ii7 V C: ii7 I C: ii7 I V

The natural progression of The Chord of the Diminished Seventh is to the tonic:—

80. 

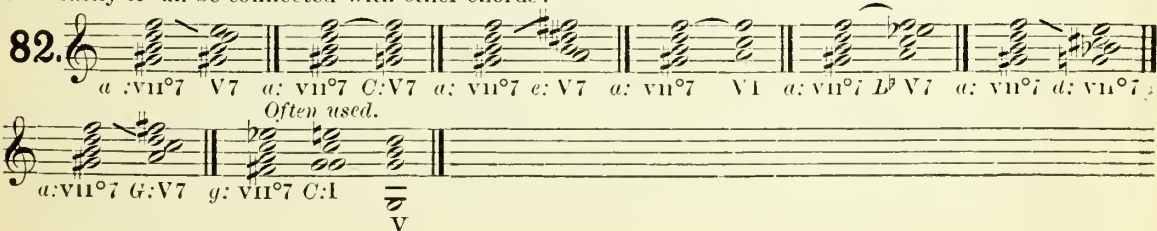
a: vii°7 I

but its peculiar construction allows it to be treated with the greatest freedom. By enharmonic changes of its intervals, it can be made to represent a number of keys:—

81. 

a: vii°7 c: vii°7 b: vii°7 b: vii°7

Each of these four chords give out precisely the same sound, but the manner in which they are written shows that they belong to four different keys. A few progressions are given below, which will illustrate how easily it can be connected with other chords:—

82. 

a: vii°7 V7 a: vii°7 C: V7 a: vii°7 e: V7 a: vii°7 V1 a: vii°7 b: V7 a: vii°7 d: vii°7

Often used.

a: vii°7 G: V7 g: vii°7 C: I

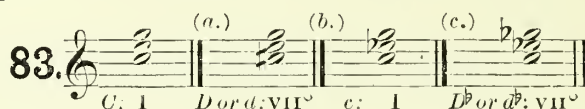
V

Compare the last example with No. 79 (a).

## CHAPTER VIII.

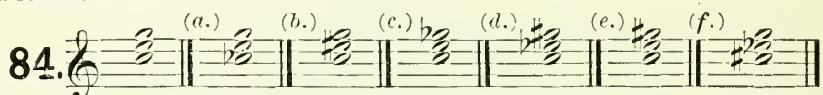
## CHROMATIC ALTERATION OF CHORDS.

The chromatic alteration of one or more intervals of a fundamental chord, will either cause a modulation, or give chord-formations which are new to us. The major triad may be altered so as to give the following modulations:—

83. 

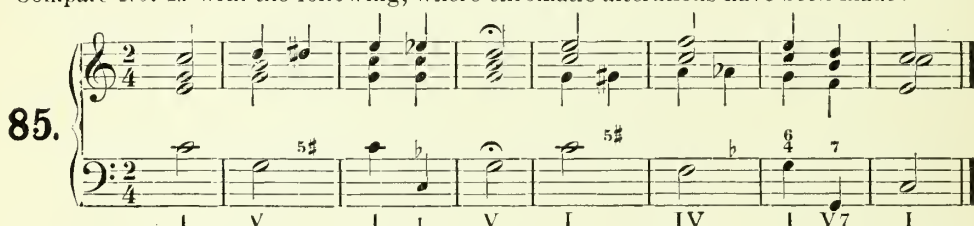
C: I    D or d: VII°    e: I    D♭ or d♭: VII°

New chord-formations:—

84. 

C: I    D or d: VII°    e: I    D♭ or d♭: VII°    F: II    G: III    A: IV

The chords at *e* and *f* are the only ones in Ex. 84, which will be treated as *real* chords. The others may arise accidentally through chromatic leading of the voices. The chord at *e* will be recognized as the triad of the 3rd degree in minor—the *Augmented Triad*. It will usually be found in major, on the 1st, 4th and 5th degrees, as a major triad with altered (raised) fifth—the raised interval progressing upward a degree. Compare No. 12 with the following, where chromatic alterations have been made:—

85. 

I    V    I    I    V    I    IV    I    V7    I

The augmented triad appears in the 2nd and 5th measures. By chromatic alteration the minor triad succeeds the major in the 3rd and 6th measures.

The dominant chord of the seventh can be altered by raising the fifth, which gives us a new formation, an *augmented triad with a minor seventh*. We can apply it in the second measure of No. 85, thus:—

86. 

I    V7    I    I    V    I    IV    I    V7    I

The resolution of this chord is the same as the Dominant Chord of the Seventh, only the fifth *must* ascend on account of the raised fifth pressing upward.

Compare No. 54 with the following:—

87. 

I    V7    I    I    V    I    IV    I    V7    I

By introducing these Chromatic Alteration of Chords, the voices become more flowing, but we lose the more vigorous and solid progressions of the original. In the last chord of the 2nd measure, will be found the same formation as at No. 84 (c), with the addition of a seventh. In the 5th measure is an augmented triad with a minor seventh in the 2nd inversion, which brings the augmented fifth in the Bass. By following out the leading of the voices, and at the same time noticing the fundamental construction of the chords, the student will soon become sufficiently familiar with these Chromatic Alterations to be able to apply them when necessary.



## THE AUGMENTED CHORD OF THE SIXTH.

The first inversion of the chord at No. 84 (*f*), gives a chord very much used, called *The Augmented Chord of the Sixth*:—

88. *1st Inversion.*

Its natural resolution is to the dominant. The 3rd (original 5th) is the only interval which can be doubled.

89.

By the addition of a diminished seventh to this chord, a very important secondary chord of the seventh is formed, called

## THE AUGMENTED CHORD OF THE SIXTH AND FIFTH.

The Augmented Chord of the Sixth and Fifth is said, however, to be derived from an altered chord on the 2nd degree of the minor scale, and not from the above chance formation. Thus, the chord of the seventh on the 2nd degree of A minor, would give:—

90. *With 3rd Raised. With 9th Added. 2nd Inversion. 9th Omitted. With 9th. Fundamental Omitted.*

The natural resolution of this chord is to the dominant:—

91. (a.) (b.) (c.)

The resolution is often delayed, or suspended, as at (c). If resolved as at (b), parallel fifths will appear, but they are not always to be avoided with this chord, as they are not disagreeable, in fact, quite the reverse in many cases. Should they wish to be avoided, the fifth from the Bass can be resolved in advance of the rest of the chord:—

92. *or or*

Some theorists claim that *The Augmented Chord of the Sixth and Fifth* is a *Dominant Chord of the Seventh*, with the seventh changed enharmonically:—

93. (a.) *Dominant 7th of Bb.* (b.) *Eb changed to D#.*

In the example at (a) the resolution is to Bb, and is satisfactory without a further progression. At (b) the resolution is entirely different, and requires still further progression before a feeling of rest is experienced. It would take more space than we have at our disposal to quote the views of various authors in regard to this chord. Its merits are discussed at great length by GODFREY WEBER, in his "Theory of Musical Composition." The last part of Ex. 44 may be altered so as to receive this chord:—

94. *Regular \* Resolution. Sixth, Fourth \* and Third.*

*Suspended Resolution.*      *Suspended Resolution.*

a: 1 II°7 I V7      a: II°7 I V7 I a: VI II°7 V

In the 3rd and 4th examples, the parallel fifths are avoided by *suspending* the resolution. In the last example the Tenor avoids fifths with the Bass by *anticipating* the resolution.

We have now noticed all, and have shown how to apply nearly all the chords in general use. A recapitulation here follows.

## TABLE OF ALL THE CHORDS IN MAJOR AND MINOR.

### TRIADS.

*Major Triads.*      *Minor Triads.*

Major Scale.      Minor Scale.      Major Scale.      Minor Scale.

C: I IV V      a: V VI I      C: II III VI      a: I IV V

*Diminished Triads.*      *Augmented Triad.*

Major Scale.      Minor Scale.      Minor Scale.

C: VII°      a: II° VII°      a: III#

### CHORDS OF THE SEVENTH.

*Major Triad with Minor 7th.*      *Major Triad with Major 7th.*

In Major.      In Minor.      In Major.      In Minor.

C: V7      a: V7      C: I7 IV7      a: VI7

*Minor Triad with Minor 7th.*      *Diminished Triad with Minor 7th.*

In Major.      In Minor.      In Major.      In Minor.

C: II7 III7 VI7      a: IV7      C: VII°7      a: II°7

*Dim. Triad with Dim. 7th.*      *Aug. Triad with Major 7th.*

In Minor.      In Minor.

a: VII°7      a: III7

### INVERSIONS.

#### OF THE TRIADS.

*The Chord of the Sixth.*

C: I6

*The Chord of the Sixth and Fourth.*

C: I6/4

#### OF THE CHORDS OF THE SEVENTH.

*The Chord of the Sixth and Fifth.*

*The Chord of the Sixth, Fourth and Third.*

*The Chord of the Second.*

C: V6/5      C: V6/4/3      C: V2



## ALTERED CHORDS.

In Major. *Augmented Triad.* *Aug. Chord of the Sixth.*

*Augmented Chord of the Sixth, Fourth and Third.* *Augmented Chord of the Sixth and Fifth.*

## CHAPTER IX.

## MODULATION.

TO MODULATE, is to pass from one key, or tonic, to another by means of tones foreign to the prevailing key. Thus, if in the key of C, the tone F# should occur, as an interval of a chord\*, the ear expects a change of key, for the tone F# does not belong to the key of C, but to G; and as G is one of the keys nearest related to C, the ear naturally expects its appearance. Should Bb occur, the ear would anticipate the key of F. The tone G# would indicate a modulation to A minor, the relative minor of C. The keys nearest related to C, are G, F, A minor and D minor. The tonic triads of these keys are *also triads in the key of C*; thus, G is the triad of the 5th degree, F of the 4th, A of the 6th, and D of the 2nd. It is easy to understand, that when we modulate into any of these keys, we have passed to a *near-related* key. If we modulate from C to Db, or F#, we have passed to a *remote* key, or one *not* nearly related. The *Dominant Chord of the Seventh* and the *Chord of the Diminished Seventh*, are the most decisive means of modulation; thus the chord G# B, D, F, can belong to but one key—A minor, and the appearance of that chord would indicate *unmistakably* that key. Some examples of modulation follow:—

95. *C to G.* *C to F.* *C to A Minor.* *C to D Minor.*

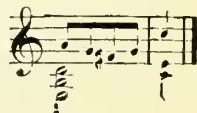
*C to Db.* *or.*

Let us try the effect of Modulation on one of our former examples. We will pass only to the nearest related keys in our first attempt. —

96. (a.) (b.) (c.) (d.)

*or C: V* *or C: II*

\*The tone F# might occur as a chromatic passing, or help tone, without indicating a modulation, thus:



At (a) we touch the key of *D minor*. In the previous chord, A, C $\sharp$ , and E, were taken to be the Dominant of D. At (b) we have D, F $\sharp$ , A, and C, which constitute the Dominant of G, which chord appears in the next measure. At (c) is a major triad with minor seventh—the chord of the Dominant Seventh. Its *fundamental* is E, and its progression will be to the tonic (a fourth higher), which is A minor. The chord at (d) is a chord of the Dominant Seventh, with the Seventh in the Bass. This combination, A, C $\sharp$ , E, G, can only be the Dominant of D, which appears in the next measure. This chord (d, f, a,) can now be considered as in D minor, or it can be reckoned as standing on the 2nd degree of C. This would give the close so often referred to: *II V I*. By raising the Bass tone (at b) from D to D $\sharp$ , we will get a chord of the diminished seventh. The D $\sharp$  will then require to ascend to E. The chord in the fourth measure can be changed to E, G $\sharp$ , B. This will serve as Dominant triad to A minor, which we can put in place of C in the fifth measure. This will give an entirely different effect to the fourth and fifth measures, but less variety of keys, as we lose G major, and get nothing in its place but A minor, which is reached further on at (c) in No. 96. This is seen below; No. 96 repeated from (a):—

97. (a.)

d: I a: vii°7 E: I a: V7 I V7 I d: V7 I

THE CHORD OF THE DIMINISHED SEVENTH, owing to its *pliable nature*, can be used to great advantage where sudden modulations are required. As shown at Ex. 81, the same chord can be made by enharmonic changes, to belong to four keys, and it can resolve into the major as well as the minor triad, thus giving four more keys, to which we can modulate through this one chord.

There are but *three radically different* chords of the Diminished Seventh:—

98.

c: vii°7 g: vii°7 d: vii°7

All other forms are but enharmonic changes of the above. By lowering one of the intervals of a Chord of the Diminished Seventh, a half-step, a Chord of the Dominant Seventh is formed:—

99.

a: vii°7 C: V7 a: vii°7 A: V7 c: vii°7 Eb: V7 eb: vii°7 Gb: V7 gb: vii°7 Bb: V7

No. 82 will show what a variety of Modulations can be made through this chord in connection with *deceptive cadences*.

THE CHORD OF THE SIXTH AND FOURTH is much used in modulating. When introduced as in the 2nd example of No. 95, a modulation is felt at its entrance, even before the F $\sharp$  in the next chord is heard. This chord should be managed with great care, as its use in many cases would prove weak and unsatisfactory. Space will not permit much to be said, but some hints may serve to put the student on his guard against a too free use of this chord. We have seen it oftenest in our examples in connection with the *closing cadence*, where it is of good effect. It may also be used as in No. 44, 2nd and 3rd measures, where the *Bass is led by degrees to and from it*, and as a *passing chord*.† Some examples will show its application in Modulation.

100.

C: I G: I V I C: I vii°c a: I V7 I C: I V d: I V I

† See No. 113, first and last examples.

## CHAPTER X.

## SUSPENSIONS.

A tone carried over from one chord to another, to which it does not belong, is called a *Suspension*.

*Original Form.*

*Suspension Applied.*

101.

In the above example, C in the Soprano is held over into the next chord, instead of taking B at once, as in the original form.

A Suspension must be *prepared* and *resolved*. The C in the first chord (No. 101) forms the *preparation*, C in the second chord the *suspension*, and B the *resolution*. The treatment is the same as in the case of the secondary chords of the seventh, shown at Ex. 58.

The Suspension can be prepared by any interval of the previous chord:—

*Prepared by Octave of Fund.*

*Prepared by 3rd.*

*Prepared by 5th.*

*Prepared by Dom. 7th.*

102.

The *preparation* should occur upon the *unaccented*, and the Suspension upon the *accented* part of the measure. A Suspension can take place in any voice, and if it resolves to the *third* of the chord, it is called a *suspension before the third*; if to the *octave*, a *suspension before the octave*, etc.

Any interval of a chord may be suspended—the fifth more seldom than the octave or third, and the seventh very rarely.

*Suspension Before Octave of Fundamental.*

*In Soprano.*

*In Alto.*

*In Tenor.*

*In Bass.*

103.

*Before the Third.*

*Before the Fifth.*



The tone of resolution should not, as a rule, be doubled in any other voice—the Bass excepted. Should it become necessary, however, on account of the leading of the voices, to double the tone of resolution, it must be at the distance of an octave, thus:—

104.

C: 11      1

Suspensions in the Bass admit of no doubling in the other voices:—

105.

5      4      3      2      1

In the Thorough-Bass figuring for the suspensions, some additional figures are necessary to indicate them; thus, when the suspension is a *ninth* from the Bass, it will be indicated by 9. and the *resolution* by 8; when the suspension is a *fourth* and the resolution a *third* from the Bass, it will be marked  $\frac{5}{4} \frac{3}{2}$ . A dash after a figure indicates a continuance of that interval; thus,  $\frac{5}{4} \frac{3}{2} \frac{3}{2}$  denotes that the 2nd, 4th and 5th from the Bass, are to continue without change as the chord into which the Bass is to resolve:—

106.

5      4      3      2      1

The usual manner of figuring the suspensions will be made clear by an examination of examples 102 and 103.

## CHAPTER XI.

### PASSING AND CHANGING NOTES. PASSING CHORDS.

A note used in passing from one harmonic tone to another is called a *passing note*:—

107.

(a.)      (b.)

The passing notes are marked with a +. Those at (a) are called *diatonic*; those at (b) *chromatic* passes.

Changing notes appear before the principal note—either above or below—in a manner similar to “grace notes”:—

108.

Changing notes are often grouped together between or before harmonic tones:—

108<sup>1</sup>.

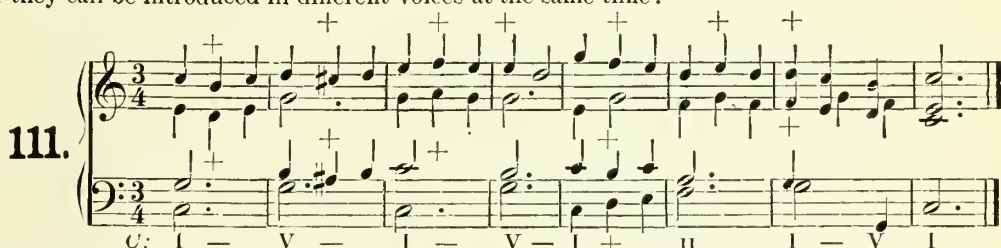
Definite rules need not be given for the employment of passing or changing notes. A musical ear will know intuitively how to use them. We can give No. 42 a more flowing melody by introducing these help-tones:—



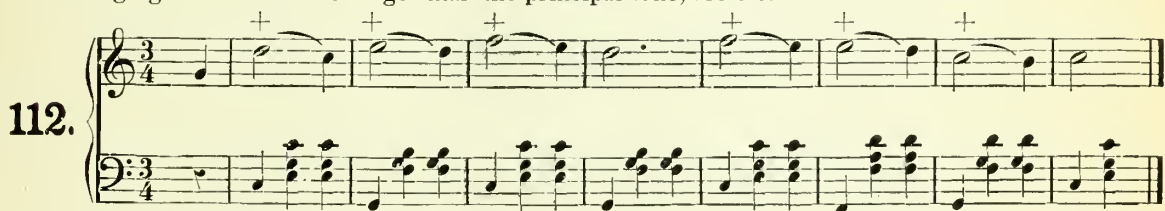
Or in the following manner:—



Or they can be introduced in different voices at the same time:—



Changing notes which are longer than the principal tone, are often found in Waltzes:—



Passing notes in all the voices give rise to what are known as *passing chords*. The 2nd and 3rd chords of the fifth measure of No. 111 may be called passing chords. They always take place on the unaccented part of the measure. The following examples will show the characteristics of these chords without further explanation:—



## CHAPTER XII.

### THE ORGAN POINT.

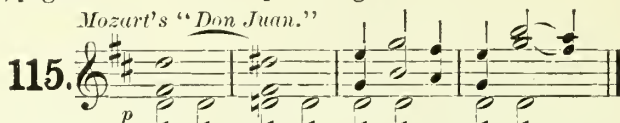
The *Organ Point* is a sustained tone in the Bass—the *Tonic* or *Dominant*, and sometimes both—over which harmonies progress without regarding it as a harmonic tone. It must *begin* and *end* as a *chord-tone*:—



The chords to which the Organ Point does not belong as a harmonic tone, are indicated by +.

During the continuance of the Organ Point, the next voice above is to be treated as the Bass. Sustained tones can occur in the upper voices, and are called *stationary voices*. They need good management to make them effective, the foreign tones sounding much rougher than in the case of the Organ Point. For a fuller account of the Organ Point see Richter's Manual, page 123, and Weber's Theory of Musical Composition, volume II, page 675. Some examples are given below:—

Mozart's "Don Juan."

115. 

R. Wagner uses the Organ Point in connection with modulation, with fine effect, in the sailor's chorus of his opera

"Flying Dutchman."

Voices 

G: 1 V7 C: V7

Beethoven's "Egmont" Overture.

117. 

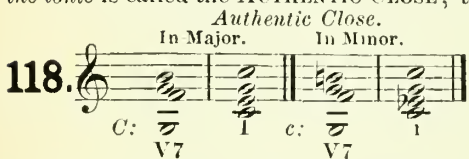
### CHAPTER XIII.

#### THE VARIOUS FORMS OF CLOSE.

Two principal forms of Close (or Cadences) are used. That which proceeds through the *dominant to the tonic* is called the **AUTHENTIC CLOSE**; that through the *sub-dominant to the tonic* the **PLAGAL CLOSE**.

*Authentic Close.*

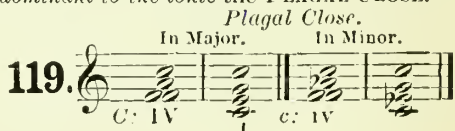
In Major. In Minor.

118. 

C: V7 I c: V7 i

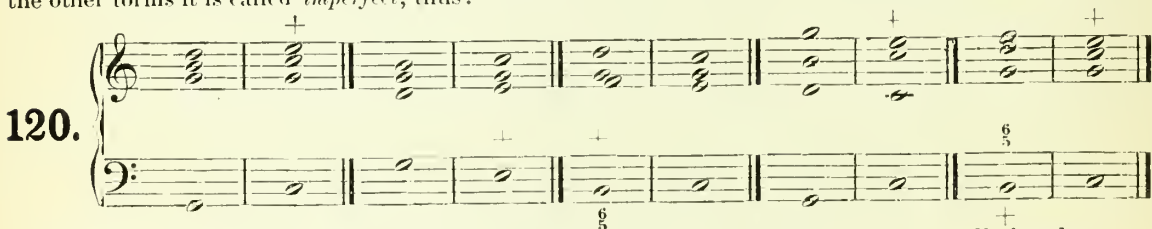
*Plagal Close.*

In Major. In Minor.

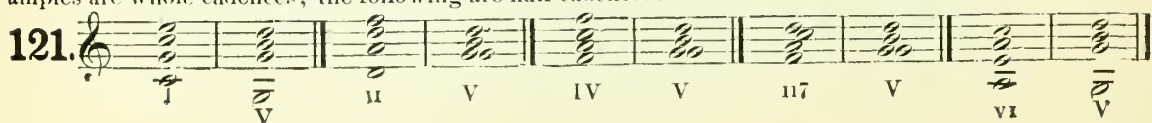
119. 

C: IV I c: IV i

The Authentic Close may be *perfect* or *imperfect*. It is *perfect* when the Bass proceeds by *fundamentals* from the dominant to the tonic, the Soprano closing with the key-note, as in the above examples. In all the other forms it is called *imperfect*, thus:—

120. 

The Close on the *Tonic* is called a *whole cadence*; on the *Dominant* a *half cadence*. All the above examples are whole cadences; the following are half cadences:—

121. 

I V II V IV V II V VI V



## CONCLUSION.

To become familiar with the practical application of the principles of harmony, the student is recommended to analyze musical compositions of different kinds in the following manner: Place the Roman numerals *under* the Bass, to indicate the degree of the scale which stands as *fundamental* to the chords; thorough-bass figures *over* the Bass to denote the inversions, and + over the passing and changing notes. Then examine the progressions and take note of all the covered octaves and fifths, doubled intervals, and the whole, half, complete and deceptive cadences. The next example will show how the work should be done:—

122.

a. b. c. d. e. f. g. h. i.  
 k. l. m. n. o. p. q. r. s.  
 G: I I V VI I VI V I I — V VI IV I V  
 VI V I V I IV V I I I VI V II I V7 I

REMARKS:—*a*, Fundamentals doubled in first four chords; *b*, covered fifths between Tenor and Bass; *c*, deceptive cadence, V—VI; *d*, 1st inversion of tonic triad; also passing note in Tenor which might be called a *fifth* of the chord B, D, F $\sharp$ ; *e*, covered fifths between Soprano and Alto; *f*, whole close; incomplete cadence because fundamental is not in Soprano; *g*, deceptive cadence; *h*, third doubled; *i*, half cadence; close on dominant; *k*, covered fifths between Soprano and Tenor; *l*, inversion of triad; Alto led from G to D to get better position and avoid unison with Soprano from G to E; *m*, passing note in Tenor; Subdominant without fifth; *n*, complete cadence; *o*, third doubled: covered fifths between Tenor and Soprano; *p*, fifth doubled in triad of 2nd degree, passing tone in Alto; *q*, 1st inversion of tonic triad, passing tone in Bass leading to fundamental of dominant triad; *r*, authentic close; *s*, perfect close or cadence.

A careful dissection of the works of good composers, is the best mode of obtaining a *practical knowledge of musical composition*.

## PART II.)

### INSTRUMENTATION—THE ORCHESTRA.

#### CHAPTER XIV.

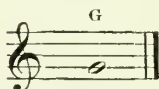
#### CLEFS.\*

Before beginning the study of Instrumentation, the student should make himself thoroughly familiar with the different Clefs; otherwise the reading of scores will be attended with great difficulty. In many orchestral scores four kinds of Clefs will be found—Treble, Alto, Tenor and Bass. The manner of using them not being uniform with all writers, and the custom of various times and places being also different, it will be necessary to examine the subject with some particularity.

CLEF (*Italian, Chiave; German, Schlüssel*), "The sign placed at the beginning of a staff, or stave, showing the *absolute pitch*, the lines without it showing only the *relative distance of sounds*."

"Walter Oddington (13th century) used one of the letters of the musical notes as a Clef to his stave of four lines. At this period, it was not usual to employ leger lines, but if the voices exceeded the limit of the stave, the position of the Clef was altered. Previous to this time, a red and a yellow line were used: the former bore the note F, the latter C. In the 16th century five sorts of Clefs were in use, namely, the gamut F, the F, C, g and d Clefs. The gamut and d Clefs were subsequently discarded, the C, F and G being found sufficient for all purposes." "The characters used for these Clefs are but corruptions of the old forms of the letters C, F and G."†

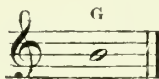
THE TREBLE OR G CLEF is placed on the second line



and is used for high voices and instruments. When used for the *Tenor voice* the sound is an octave below the written note. In some old French scores it is placed on the first line.



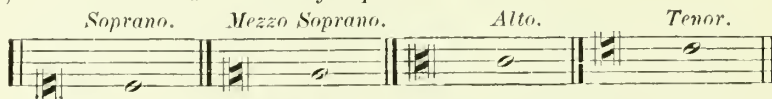
It was then called the "French Violin Clef." In an old work by Christopher Demantius (1656) it is placed on the third line:—



THE C CLEF appears on all the lines but the fifth, being a movable Clef. It represents what is known as "middle C"



on the piano-forte, no matter on what line it may be placed:—



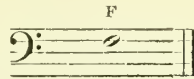
When placed on the *first line* it is called the SOPRANO CLEF, and used chiefly in church music for the Soprano voice. It is not much used at the present day, although some good writers still employ it. When on the *second line* it is called the MEZZO SOPRANO CLEF, and used for second Treble and sometimes Alto voices. When on the *third line* it is called the ALTO CLEF, used for Alto voices, Violas and Alto Trombones. When placed on the *fourth line* the TENOR CLEF, used for Tenor voices, Tenor Trombones and the upper register of the Bassoon and Violoncello.

\*In the preparation of this chapter I have quoted largely from the excellent "Dictionary of Musical Terms," by Stainer & Barrett

†See Grove's "Dictionary of Music and Musicians."



THE F, OR BASS CLEF is placed on the *fourth line*



and is used for Bass and sometimes Tenor voices and instruments. When placed on the *third line* it is called the BARITONE CLEF and was used in vocal music in the 16th and 17th centuries. Handel sometimes used it for Horn parts. It is not now used. Below will be found the position of the scale in the different Clefs, *the sound being identical in each Clef*:—

G CLEF, TREBLE.



C CLEF, SOPRANO.



C CLEF, ALTO.



C CLEF, TENOR.



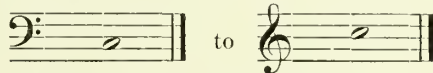
F CLEF, BASS.



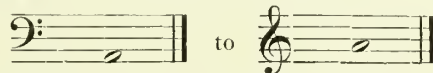
Practice in writing parts from one Clef into another will soon familiarize the student with them sufficiently well to enable him to read scores without difficulty. Some writers now-a-days advocate the use of the Treble Clef exclusively for Military or Brass Band music, maintaining that pupils learn the Treble easier than the Bass Clef. When it is remembered how readily children learn *both Clefs* on the piano, and read at sight *full chords in the two Clefs*, it seems absurd that a performer having but few notes in a measure, and but *one note at a time*, cannot learn to play them as well in one Clef as another. Whether “middle C” is located on the *first ledger line above* (as in the F Clef) or on the *first ledger line below* the staff (as in the G Clef), cannot make much difference with anyone having the least musical ability.

It will not be out of place to quote from the very sensible remarks of G. Weber, in his “Theory of Musical Composition,” on this subject:

“I repeat it as my decided conviction that the different Clefs are by no means a troublesome multiplication of musical signs, by no means a superfluity and an unnecessary encumbrance; but rather a most estimable *facility*, which we cannot give up without subjecting ourselves either to great inconveniences or to disagreeable ambiguities and want of precision. Let it not be said that one can get along perfectly well with only two Clefs, as for example, with the *Treble and Bass Clefs*. In order to write a melody or passage which lies chiefly within the range of tones from



the Treble Clef is altogether too high, while the Bass Clef is entirely too low, and the Alto Clef alone is properly adapted to the purpose; as is the Tenor Clef for the range, say from



If we entirely abolish the middle Clefs, confine ourselves to the two outer Clefs, the very high Treble and the very low Bass Clefs, we thereby rob ourselves of the great convenience which the middle Clefs afford, and do not even retain *one*—say the *Alto Clef*, which so admirably holds a mean between the two extremes. Perhaps the Soprano Clef might be replaced by the Treble Clef, but the Alto Clef cannot in its lower department be replaced by the Treble Clef, the latter being much too high for that purpose; nor in its higher department by the Bass Clef; this being altogether too low. How, for example, could the chord



be written either in the Treble or Bass Clef? It must not be replied that the Clefs in question might be represented by the two extreme ones, taken, say an octave higher or lower, as for example, the *Tenor Clef* by the Treble Clef; for, on the one hand, this can only be done by conceiving the latter to be one

octave lower, and in that case it cannot, on the other hand, be perceived what advantage is gained by being obliged at one time to conceive one and the same Clef to be in a certain state, and at another in a different state; at one time an octave higher, and at another an octave lower. Certainly it is not more difficult to read the Tenor Clef *as it is*, than to read the Treble Clef *as it is not*. Even if the different Clefs were really in themselves without object or utility, as they certainly are not, still even in that case I might not be prepared to advise the neglect of an acquaintance with them, and thereby render illegible all the existing scores of our excellent musical composers, in all of which these Clefs occur."

The following from Stainer & Barrett's "Dictionary of Musical Terms" shows that the "Clef controversy" is not as new as some people imagine:

"Thomas Salmon, 1676, proposed the use of the letter T for the Treble Clef, M for the mean or C Clef, and B for the Bass Clef. His proposal led him into a controversy with Matthew Locke, which was maintained on both sides in language not very creditable to either. Francis Delafond, in 1725, suggested the use of one Clef only, the F, or Bass Clef. A century later, Miss Glover, in a pamphlet explaining her views on what she called the "Tetrachordal System," proposed to abolish all Clefs, a proposition which has since been carried out in the Tonic—sol-fa method of teaching singing. The use of the Treble Clef for all purposes has also been recently advocated, but with little success."

## CHAPTER XV.

### INSTRUMENTATION.

INSTRUMENTATION is the art of arranging the parts for the different instruments in an orchestra or band in such a manner as to produce the desired effect when played together.

In learning instrumentation the student will have to master the most difficult branch of music, and unless he have natural aptitude and opportunities of hearing his work performed, it would seem impossible for him to succeed; for no book or teacher can explain *the effect* of combining tones of different quality. We may be told that Mozart, Beethoven, or Wagner, have obtained beautiful effects by combining Horns and Bassoons with Clarionets, but we can have no idea of *how* those combinations sound—even with the notes before us—without having first *heard them*.

Then there are so many different instruments, in so many different keys and of such various qualities of tone; so many ways of treating one and the same instrument; so many instruments which require an acquaintance with their technical peculiarities in order to write well for them, that unless one has a special gift in this direction, it is hardly worth while to undertake the study. A person may be a good performer on an instrument and still not be able to learn harmony. Some of the best performers and sight-readers seem *absolutely stupid* when trying to master theory, and many who are well versed in theory find great difficulty in instrumenting their own compositions.

The following hints to those who propose to study this department of music will be found worthy of notice.

1. The first and most important thing to secure success is a *thorough knowledge of Harmony*. WITHOUT IT FAILURE IS CERTAIN.

2. More can be learned by studying the scores of good composers than from any book of instruction. A book can give the mechanical construction of an instrument, and what may or may not be possible for it, but the *practical application*, or *usual way* of writing for it, is best learned by studying scores.

3. Improve every opportunity of hearing good music well performed, and note the effect of the different instruments singly and in combination with others. If possible, procure scores of the pieces and become familiar with them *before* hearing them played. This will be of great assistance in discovering how certain effects are obtained which can be analyzed and studied more carefully *after* performance.

4. For orchestral study the scores of Haydn and Mozart should be taken up first, as they are comparatively simple and easily understood, then for more elaborate examples, those of Beethoven, Weber, Schubert and Mendelssohn. The scores of the more modern composers for orchestra, such as Berlioz, Liszt and Wagner, can only be understood by those having a quick eye, an educated ear, and a brain capable of analyzing music in its most complicated form. But few scores of Military Band music are published, consequently the student will have to make scores for himself. This may be turned to advantage by observing, as the parts are copied, how they are arranged with reference to each other. The writer can testify to the benefit he has received from this kind of work.

## CHAPTER XVI.

## MUSICAL INSTRUMENTS AND THEIR CLASSIFICATION.

As a preliminary step in the examination of our subject, we will take an inventory, or general view, of the materials with which we shall have to become acquainted. Berlioz, in his great work "Modern Instrumentation and Orchestration," classifies musical instruments as follows:—

Stringed Instruments.	{	Their vibration effected by the bow	{ Violins, Violas, Violes d'amour, Vi loncelli, Double-basses.
		Played by hand.	{ Harps, Guitars, Mandolins.
		With keys.—Piano-forte.	
Wind Instruments.	{	With reeds.	{ Hautboys (Oboi), Corni Inglesi (English Horns), Bassoons (Fagotti), Bassons de quint, Double-bassoons (Contra Fagotti), Clarionets, Corni di bassetti (Basset-horn), Bass-clarionets, Saxophones.
		Without reeds—Flutes, great and small.	
		With keys.	{ Organ, Melodium, Concertina.
Instruments of Percussion.	{	With mouth-piece, and of brass.	{ Horns, Trumpets, Cornets, Bugles, Trombones, Ophicleides, Bombardons, Bass-tubas.
		Of definite sonorousness.	{ Kettle-drums (Timpani), Ancient Cymbals, Set of Bells, Glockenspiel, Keyed-harmonica, Bells.
		Of indefinite sonorousness, and producing various characteristic noises.	{ Drums, Long-drums, Tamborines, Cymbals, Triangles, Gongs, Pavillon Chinois.

Some of these instruments are rarely or never seen in this country; thus, among the stringed instruments, the Viola d' amour and the Mandolin; among the wind, the Basson de quint, Corno di bassetto, Bugle and Ophicleide; among the percussion instruments, the long Drum and pavillon Chinois, or staff of bells, are not often used.

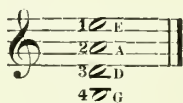


## CHAPTER XVII. THE SMALL ORCHESTRA.

THE SMALL ORCHESTRA most commonly written for at the present time, consists of 1st and 2nd Violins, Viola, Basso, Flute, Clarionet, 1st and 2nd Cornets, Trombone and Snare-drum—ten instruments more or less. This is the band usually employed for dance music. Some prefer two Clarionets and only one Cornet; others prefer a Cello, with one Clarionet and one Cornet. The most effective combination for a small theatre orchestra would be 1st and 2nd Violins, Viola, Cello, Basso, Flute, Clarionet, Cornet, two Horns, Trombone and Drums; but the difficulty of obtaining good Horn-players often makes it necessary to use *two* Cornets as a substitute, although a very poor one it must be confessed. With a band of this size there should be at least two performers on the 1st Violin part. We will now proceed to study each of the instruments first mentioned above, which we call the small orchestra. What is termed the “stringed quartette” must be well understood, for it is the foundation of the orchestra, and clumsy management of this department easily upsets the whole arrangement. A *practical* knowledge of the stringed instruments is of the greatest importance, and those who hope to write well for the orchestra should learn to play the Violin—at least well enough to know *something* of its characteristics.

## CHAPTER XVIII.

THE VIOLIN has four strings tuned by fifths:—



Its compass as used in the modern Orchestra extends from



but for the great mass of players E or F



will be found quite high enough. Music in any key is practicable on the Violin, but the keys in sharps are generally preferred. Anything beyond two flats is looked upon by many as entirely out of the question; therefore, those who write to please the “popular taste” must keep within bounds—say not to exceed four sharps or three flats.

The Violin is the leading instrument of the Orchestra, and to it must be assigned the melodies, or leading parts; but when melodies are played by other instruments as *solos*, the Violin may be made to play accompaniments with good effect. See examples 127, 128 and 129 for different styles of accompaniments.

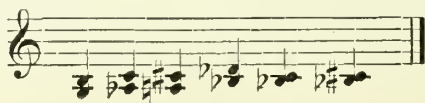
Chords of two, three, or four notes may be written, thus:—



but for notes of long duration two only can be sustained: thus, the last chord above would give the following effect if held out for any length of time, as the bow can only touch two strings at once:—



Chords, or “double stops” below D are impossible, as all the notes below D have to be made on the 4th or G string:—

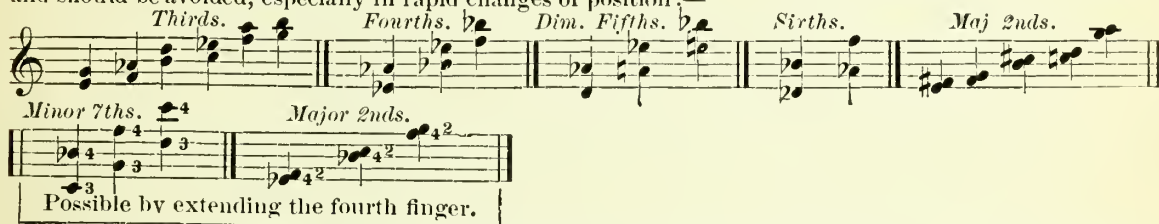




If it is desired to write chords as above, they can be divided between two Violins and "*divisi*" written over them:—



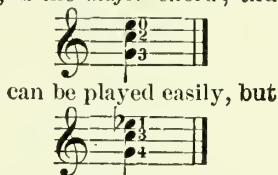
In writing chords, particularly for the 2nd Violin, it is well to select those which can be played in the *first position*.\* The following are among many of the double stops that cannot be played *without* "shifting," and should be avoided, especially in rapid changes of position:—



Passages of sixths (major or minor) followed by augmented fourths, and *vice versa*, should be avoided in rapid movements on account of cross-fingering:—



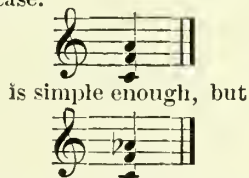
The table below will show how some of the chords most in use can be written in the first position. The fingering has been marked where cross-fingering occurs. The (+) over a chord denotes that the *minor* cannot be played with the same fingering as the *major* chord; thus:—



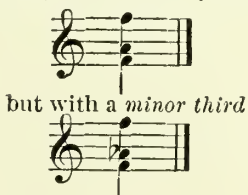
would have to be played in the 4th position and might be difficult to get in tune; therefore, it should be written in some other form:—



The chord of F minor presents a similar case.



is impossible, as the A♭ must be stopped on the 3rd, and the F on the 4th string—leaving the C unprovided for. If the F is omitted, C and A♭ can be played in the 1st position. The chord of F major often appears thus:—



cannot be played in the 1st position, the upper F being stopped on the 1st, and the A♭ on the 3rd string, leaving the 2nd string unemployed *between the two*. A *practical Violinist* would have no hesitation in selecting the proper position for a chord, but those not familiar with the instrument will meet with many difficulties of the kind enumerated above. To such, the following table may be of some assistance.

\*For an explanation of the "positions" on the Violin, see any Violin instructor.

**Table of Major, Minor and Dominant Chords of the Seventh, in the Most Used Keys, Arranged for the Violin, in the First Position.**

**C. 123.**

**C. with Dominant 7th.**

**G.**

**G. with Dominant 7th.**

**D.**

**D. with Dom. 7th.**

**A.**

**A with Dominant 7th.**

**B.**  $\frac{1}{2}$  shift.

**E. with Dominant 7th.**

**B.**  $\frac{1}{2}$  shift.

**B. with Dominant 7th.**

**F.**

**F. with Dominant 7th.**

**B $\flat$**

**B $\flat$  with Dominant 7th.**

Many more examples might be given, but the above will serve as a guide.

Chords of three or four notes are best which contain one or more open strings. Berlioz says, "I even think if none of these (open) strings can be had for a chord of four notes, it is better to rest contented with a chord of three notes."

THE TREMOLO is much used in Violin music. It is made by the rapid repetition of one or more notes:—

Here is another variety, made by slurring the notes together instead of bowing them:—

Sometimes one note is *sustained* while the others are made tremolo:—

Passages requiring much force, and crescendos leading up to a fortissimo, often have the notes repeated in the manner of a tremolo:—

For remarkably fine examples of the tremolo see Nos. 140 and 141.

Strauss, in one of his Waltzes, has introduced a tremolo played pianissimo, for the high notes of the Violins, which, coming in after a silent bar, has a delightful effect, giving an idea of the rustling of leaves in the wind. The passage is here given in full score:—

## AUS DEN BERGEN WALZER.

(From the Coda.)

J. STRAUSS, Op. 292.

124.

FLUTE. *pp* *8 va*

OBOE. *pp*

CLARINET 1 IN E $\flat$ . *pp*

CLARINET 2 IN B $\flat$ . *pp* Col. 1st Clarinet 3 va lower.

FAGOTTI. *pp*

1. *pp*

2. *pp*

HORNS IN F. 3. *pp* 4. *pp*

TRUMPETS IN F. *pp*

VIOLIN 1. *pp*

VIOLIN 2. *pp*

VIOLA. *pp*

CELLO AND BASSO. *pp*







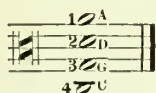
**HARMONICS** are sounds made by touching the string lightly at certain points, instead of pressing it upon the finger-board; thus, if the finger touch the string at half its length, it will give the octave of the open string; at one-third, the 5th; at a quarter, the double octave; at a fifth, the 3rd above the double octave, etc. Harmonics are not much used in orchestral writing. For a full treatment of natural and artificial harmonics, see Berlioz "Instrumentation," page 13, or "Paganini's Art of Playing the Violin, with a Treatise on Single and Double Harmonic Notes," by C. Guhr.

**THE PIZZICATO**, (abbrev. Pizz.) is played by pulling or picking the string with the finger. When the bow is again to be used, *arco* is written over the part to be so played. Rapid passages are seldom well done when played *pizzicato*, and from four to six notes in a measure, (*Allegro*), should be about the limit.

**N. B.**—In Violin music it is understood that all notes covered by a slur or bind, are to be played with one bow, while those without the slur are played staccato; care must be taken therefore, to indicate the phrasing or bowing required.

## CHAPTER XIX.

**THE VIOLA** (It.) *Bratsche* (Ger.) called in England the "Tenor," in France the "Alto." It has four strings tuned in fifths like the violin, but a perfect fifth lower:—



which on the Piano would give:—



The music is written mostly in the Alto clef, but when it runs too high, the Treble clef is introduced.—



This is about the ordinary compass, but when used as an accompanying instrument for filling up the harmony it is seldom necessary to go above E or F. Everything concerning the Violin as regards the *Tremolo*, *Pizzicato*, *Bowing*, etc., applies also to the Viola. The same difficulties in relation to double-stops will appear, to many, in an aggravated form, on account of the Alto clef, but this may be overcome by study. A very good way to get accustomed to writing for the Viola, is to transpose Violin parts to the Alto clef.

Thus, the following for the Violin:—

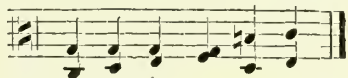


must be written, to produce the same sounds on the Viola in the Alto clef, like this:—



The same fingering is used in both cases, and on the same strings,—G and D.

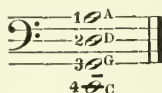
The same passage transposed a fifth lower (to C), would place it in the same situation on the Viola, as it occupies above on the Violin; that is, on the two lower strings.—



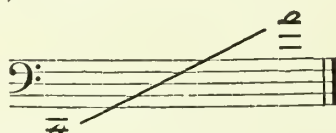
In consequence of its larger size, the tone of the Viola differs very much in quality from the Violin. It lacks the Violin's brilliancy, but is much softer and richer, and better adapted to soft, low harmonies. In music of a dramatic nature, some very striking effects can be produced on the 4th (C) string. It sometimes takes the melody with the Violin, and often plays in unison with the Cello. See Ex. 129.

## CHAPTER XX.

THE VIOLONCELLO, (abbrev. Cello.) has four strings tuned by fifths, an octave lower than the Viola:—



Its compass (for orchestral purposes), extends from the low C to A:—



and in the hands of a competent performer, much higher, say about:—



The music is written in the Bass clef, unless it runs too high, when the Tenor clef is substituted. The Treble clef is also used for very high passages, and a ridiculous custom prevails of using it in two ways in Cello music; thus if a piece *commences* in the Treble, or passes from the *Bass to the Treble clef*, the notes in the latter clef are played an octave lower than written, thus:—

*From Berlioz.*

125.

Or

Effect.

but when the *Treble succeeds the Tenor clef*, the notes are played as written:—

126.

Effect.

It is seldom necessary to employ the Treble clef, the Tenor answering every purpose, especially in orchestral music. Chords, or double notes are not so easily executed on the Cello as on the Violin, or Viola, but a good performer can play them when properly written for the instrument. In orchestral music they are not often needed, but should the student wish to write them, he had better consult an instruction book, for it would be impossible to give here, even a partial list of those which may be played.

Beside the Bass parts, which the Cello usually plays in octaves with the Double-bass, solos are written for it, and it is also doubled with the Violins to strengthen the melody. Its upper notes have a penetrating quality which make them felt as well as heard; at the same time they are full, sweet, and sympathetic, and are especially well adapted to slow movements requiring much expression. See Ex. 129, for a good specimen of Cello music. Arpeggio accompaniments played with the bow, or pizzicato, are very effective and are much used. Whoever has heard Keler Bela's "On the Beautiful Rhine" Waltz, will remember the fine effect in the introduction, of the undulating arpeggio accompaniment of the Cellos, doubled with the other stringed instruments. An extract is here given; the Horns and Trumpets are written on one staff to save space.

## ON THE BEAUTIFUL RHINE WALTZES.

KELER BELA, Op. 83.

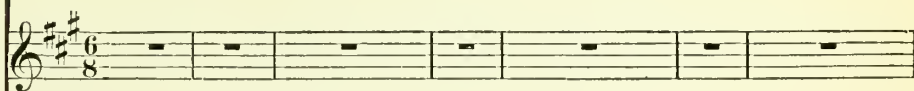
127.

*Intro. Allegretto.*

FLUTE.



OBOE.



CLARIONETS IN C.



FAGOTTI.



HORNS IN F.



TROMBONE.



VIOLIN 1st.



VIOLIN 2nd.



VIOLA.



CELLO.



BASS.



Flute *8va*  
Oboe  
Clarinet  
Bassoon  
Horn  
Trombone  
Violin 1st  
Violin 2nd  
Viola  
Cello  
Bass

*f*  
*f*  
*f*  
*f*  
*p*  
*p*  
*p*  
*pizz.*  
*p*

Detailed description: This page shows measures 1 through 6 of an orchestral score. The key signature has three sharps (F#, C#, G#). The Flute part (labeled '8va') begins in measure 4 with a forte (*f*) dynamic, playing a melodic line. The Oboe, Clarinet, and Bassoon also enter in measure 4 with a forte (*f*) dynamic, playing chords. The Horns and Trombone parts enter in measure 4 with a piano (*p*) dynamic, playing sustained chords. The Violin 1st part enters in measure 1 with a melodic line. The Violin 2nd part enters in measure 4 with a piano (*p*) dynamic, playing a melodic line. The Viola, Cello, and Bass parts enter in measure 1 with a melodic line. The Bass part has a 'pizz.' (pizzicato) marking in measure 5.



Flute *8va*  
*p*

Oboe

Clarinet *Solo 1st.*  
*p*

Bassoon  
*p*

F Horns  
*1st.*

Trombone  
*p*

Violin 1  
*p divisi.* *8va*

Violin 2

Viola

Cello

Bass

Flute *8va*

Oboe

Euphonium

Bassoon

F Horns

Trumpet

Trombone

1 Violin *8va* *loco*

2 Violin

Viola

Cello

Bass

The musical score is written for ten staves, each representing a different instrument. The key signature is two sharps (F# and C#). The Flute part starts with a wavy line indicating an octave shift (8va). The Oboe part is mostly rests. The Euphonium part has a melodic line. The Bassoon part is mostly rests. The F Horns part has a melodic line. The Trumpet part has a melodic line. The Trombone part is mostly rests. The 1 Violin part starts with a wavy line indicating an octave shift (8va) and a 'loco' marking. The 2 Violin part has a rhythmic pattern. The Viola part has a rhythmic pattern. The Cello part has a rhythmic pattern. The Bass part has a rhythmic pattern.

Very rapid passages should not be written pizzicato, but such as the following are played without difficulty:—



The next example will give a good idea of the usual method of writing Cello parts, and is altogether a piece of instrumentation which may be studied with profit.

## AUS DEN BERGEN WALZER.

J. STRAUSS, Op. 292

128.

No. 4.

*Flute. Solo.*

FLUTE &amp; PICCOLO.

OBOE.

1st CLARINET  
IN E♭.2nd CLARINET  
IN B♭.

FAGOTTI.

1st & 2nd HORNS  
IN F.3rd & 4th HORNS  
IN F.

TRUMPETS IN F.

TROMBONE  
AND TUBA.

TIMPANI IN B♭: F.

1st VIOLIN.

2nd VIOLIN.

VIOLA.

CELLO.

BASSO.



*Flute and Piccolo.*

Handwritten labels on the left margin:

- Flute and Piccolo
- Oboe
- E♭ Clarinet
- B♭ Clarinet
- Bassoon
- 1st Horn
- 2nd Horn
- Trumpet
- 1st Trombone
- 2nd Trombone
- Tuba
- 1st Violin
- 2nd Violin
- Viola
- Cello
- Bass

Handwritten notes on the staves:

- Flute and Piccolo: *pp*, *pp*
- Oboe: *pp*
- E♭ Clarinet: *pp*, *pp*, *pp*
- B♭ Clarinet: *pp*, *pp*, *pp*
- Bassoon: *pp*
- 1st Horn: *pp*
- 2nd Horn: *pp*
- Trumpet: *pp*
- 1st Trombone: *pp*
- 2nd Trombone: *pp*
- Tuba: *pp*
- 1st Violin: *pp*, *pp*, *p pizz*
- 2nd Violin: *pp*, *pp*, *p pizz*
- Viola: *pp*, *pp*, *p pizz*
- Cello: *pp*, *p pizz*
- Bass: *p*

Handwritten notes on the staves:

- Flute and Piccolo: *pp*, *pp*
- Oboe: *pp*
- E♭ Clarinet: *pp*, *pp*, *pp*
- B♭ Clarinet: *pp*, *pp*, *pp*
- Bassoon: *pp*
- 1st Horn: *pp*
- 2nd Horn: *pp*
- Trumpet: *pp*
- 1st Trombone: *pp*
- 2nd Trombone: *pp*
- Tuba: *pp*
- 1st Violin: *pp*, *pp*, *p pizz*
- 2nd Violin: *pp*, *pp*, *p pizz*
- Viola: *pp*, *pp*, *p pizz*
- Cello: *pp*, *p pizz*
- Bass: *p*



Handwritten labels on the left margin:

- Flute Picc
- Oboe
- E♭ Clar
- B♭ Clar
- Bassoon
- Trp
- Horns
- Trump
- Tromb
- Tuba
- Tym
- B♭ of
- Violin
- Violin
- Viola
- Cello
- Bass

Handwritten musical notation and dynamics:

- Flute Picc: *cres*
- Oboe: *p*
- E♭ Clar: *cres*
- B♭ Clar: *cres*
- Bassoon: *cres*
- Trp: *cres*
- Horns: *cres*, *cres*
- Trump: *mf*
- Tromb: *p*
- Tuba: *p*
- Tym: *p*
- B♭ of: *p*
- Violin: *cres*
- Violin: *cres*
- Viola: *cres*
- Cello: *cres*
- Bass: *cres*

Handwritten musical notation and dynamics:

- Flute Picc: *cres*
- Oboe: *p*
- E♭ Clar: *cres*
- B♭ Clar: *cres*
- Bassoon: *cres*
- Trp: *cres*
- Horns: *cres*, *cres*
- Trump: *mf*
- Tromb: *p*
- Tuba: *p*
- Tym: *p*
- B♭ of: *p*
- Violin: *cres*
- Violin: *cres*
- Viola: *cres*
- Cello: *cres*
- Bass: *cres*

Handwritten labels on the left margin:

- Flute
- Picc.
- Oboe
- Clarinet
- Bassoon
- Horn
- Horn
- Trumpet
- Tuba
- Baritone
- Violin
- Violin
- Viola
- Cello
- Bass

Handwritten notes on the score:

- fz* (fz)
- Piccolo*
- f* (f)
- f* (f)
- f* (f)
- fz* (fz)
- f* (f)
- fz* (fz)
- f* (f)
- fz* (fz)
- f* (f)
- f arco* (f arco)
- f* (f)
- f arco* (f arco)
- f* (f)
- f arco* (f arco)
- f* (f)
- fz* (fz)
- f* (f)

Handwritten notes at the bottom:

- Aus den Bergen Walzer.*

129.

## OVERTURE: "THE MERRY WIVES OF WINDSOR."

O. NICOLAI.

*Andante mod.*

FLUTES.

OBOE.

CLARIONETS  
IN C.

BAGOTTI.

HORNS IN F.

HORN IN C.

HORN IN C.

TRUMPETS  
IN F.

TROMBONES.

TIMPANI IN  
F: C.

1st VIOLIN.

2nd VIOLIN.

VIOLA.

CELLO.

BASSO.



Flute *8va*

Oboe

Clarinet

Bassoon

♯ Horns

C Horns

C Horns

♯ Trump

Tromb

Tym  
T. C.

1 Violin

2 Violin

Viola

Cello

Bass

*p* *mf* *p* *cres* *mf* *p* *cres poco a poco* *mf* *p*

*cres poco a poco*  
Overture: "The Merry Wives of Windsor."

*1st Flute col 1st Violin*

Flute

Oboe

Clarinet

Bassoon

Trumpet

Trombone

Tympani

Cymbals

Violin

Viola

Cello

Double Bass

*p*

*Sra*

*espress*

*espress*

Overture: "The Merry Wives of Windsor."

Handwritten labels on the left margin:

- Kornet
- Alto
- Clarinet
- Bassoon
- F Horn
- C Horn
- Alto Sax
- Trumpet
- Trombone
- Drum & C
- Violin 1
- Violin 2
- Viola
- Cello
- Bass

The musical score is arranged in 15 staves. The first four staves (Kornet, Alto, Clarinet, Bassoon) are grouped by a brace on the left. The next four staves (F Horn, C Horn, Alto Sax, Trumpet) are also grouped by a brace. The Trombone staff follows. The Drum & Cymbal staff is next. The Violin 1 and Violin 2 staves are grouped by a brace. The Viola, Cello, and Bass staves are grouped by a brace. The score includes various musical notations such as treble and bass clefs, time signatures, notes, rests, and dynamic markings.

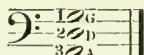


Handwritten musical score for a full orchestra and vocal soloist. The score is written on 15 staves. The instruments listed on the left are: Flute, Oboe, Clarinet, Bassoon, Horn, Trumpet, Trombone, Tuba, Violin, Viola, Cello, and Bass. The vocal soloist is labeled 'Soloist'. The music is in 2/4 time and features a variety of dynamics including *f* (forte), *p* (piano), and *fp* (fortissimo). The score includes a 'loco' marking above the Violin staff. The music is written in a key with one sharp (F#) and a common time signature (C).

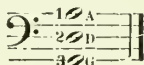
Overture: "The Merry Wives of Windsor."

## CHAPTER XXI.

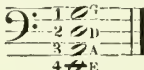
THE DOUBLE BASS, (Contrabasso). There are two kinds of this instrument—one with three, the other with four strings. The three stringed Bass is tuned in fourths:—



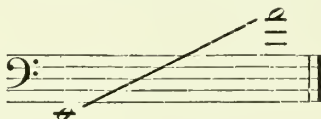
although some players tune it differently. The French tune by fifths:—



This has the advantage of extending the scale one tone lower, but necessitates shifting in playing the scales. The Bass with four strings is tuned in fourths:—



Where a good class of music is to be performed, the Bass with four strings is preferable, as many bass parts run too low for the three stringed instrument, but for dancing music, the latter has the advantage of being more powerful and sonorous. Music for the Double-bass is always written in the bass clef, the compass extending from low E to about A, the actual sounds being an octave lower:—



For this reason the Double-bass is called a *transposing* instrument. The extreme upper notes are found only in music of the first order. Beethoven has written the upper A (given above) six times in the first movement of his Seventh Symphony. Gluck, Mozart, Weber, Mendelssohn and many others frequently take the Bass up to G.

The *pizzicato* and *tremolo* are both of good effect on the Double-bass, but the former should not be written for very high notes in piano passages, the tones coming out too strong. The *tremolo* cannot be made as "close" as on the smaller instruments,—long, thick strings not speaking so quickly as short, thin ones. In consequence of the slow vibrations of the strings, it is well to avoid writing very rapid passages for the Double-bass; still, good players do bring out those of great difficulty with wonderful distinctness. Examples like the following are generally well done in good orchestras, and will show what *can* be done on the instrument:—

130.

Overture in C: Op. 124. Beethoven.

*meno mosso*

Strings and Bassoon



131.

## Overture: "Leonore" No. 3. Beethoven.

*Allo.*

VIOLIN 1. *ff*

VIOLIN 2. *ff*

VIOLA. *ff*

CELLO AND BASS. *ff*

## Overture: "Figaro." Mozart.

*Presto. All the Strings and Bassoon.*

132. *pp*

## Overture: "Oberon." Weber.

*Allo con fuoco.*

133. *ff*

VIOLINS 1. 2. *ff*

VIOLA. *ff*

CELLO AND BASS. *ff*



## 134.

## Symphony in A. Beethoven.

*vivace*

BASSOON.

VIOLIN 1.

VIOLIN 2.

VIOLA.

CELLO AND BASS.

*pp*

*pp*

*pp*

*pp*

## Symphony in A. Beethoven.

*vivace*

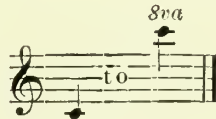
135.

*ff*

Passages in octaves with the other stringed instruments, like Nos. 130 and 132, come out more distinctly than those of a more independent character, like Nos. 131, 133, or 135. In No. 134 the effect of the Bass is most wonderful, coming in so softly and yet with such tremendous energy that the very earth seems to be rising under your feet. In dance-music, where the Bass should mark the rhythm with firmness and decision in solid fundamentals, Bases like the above examples would be out of place.

## CHAPTER XXII.

THE FLUTE, (*Ital.* Flauto; *Fr.* Flûte; *Ger.* Flöte.) The ordinary Flute has a compass of three octaves:—



The upper B and C, however, are rough and uncertain, and except in fortissimo passages, should be rarely used—in fact there is seldom occasion for going above A. This instrument is so well known that it seems unnecessary to go into the particulars of its construction and capabilities, but there are some points regarding Flutes which may confuse those who are not aware of the different modes of designating them. Thus, the ordinary Flute is generally supposed to stand in D. If that were the case, it should be classed among the transposing instruments (whose *sounds* are different from the written note) and the music written one note lower than that for the Violin—that is, if the Violin part be written in D, the Flute part would have to be written in C; but C on the Violin, and C on the Flute produce the same tone; therefore, it cannot be called a transposing instrument, but is included in the list of non-transposing instruments like the Violin, Oboe, Bassoon, and other instruments in C. Why is it, that the so-called D Flute and a D Clarinet cannot play from the same part? Because C on the D Clarinet gives the tone D, while C on the Flute sounds a tone lower. This passage:—



when played on a Flute sounds as it is written, but if played on a D Clarinet it sounds *one tone higher*, thus:—



Whether the common Flute is really a C, or D instrument, is of little consequence to the student of instrumentation—only he should know that there are different opinions in regard to it and the grounds on which they are based. We use the term “D Flute” the same as we do “B $\flat$  Trombone,” or “E $\flat$  Tuba.” Neither are transposing instruments—their notes sounding as they are written. The Flute with all its holes closed sounds D; the B $\flat$  Trombone with the slide closed gives the chord of B $\flat$ , and the E $\flat$  Tuba without the use of valves, the chord of E $\flat$ , but the written note—C for example—is the same for all:—



As Trombones and Tubas are non-transposing instruments, it matters little whether they are designated by their keys or not. It is sufficient to write simply "Alto," "Tenor," or "Bass Trombone," and "Tuba." With Flutes the case is different. They are all transposing instruments except the so-called D Flute, and there seems to be no good reason why Flutes should be an exception to the rule that a transposing instrument takes its name from the note which is *sounded* when C is *played*. Thus, C on an E $\flat$  Clarinet or Cornet sounds E $\flat$ ; C on a B $\flat$  Clarinet or Cornet sounds B $\flat$ ; C on a D Horn or Clarinet sounds C—not D! All the principal works on instrumentation (Berlioz, Lobe, Gevaert, Prout, &c.) agree that Flutes as well as other instruments, should be named from the note which is produced by playing C. It is hardly possible to give a clearer explanation of this matter than is to be found in Berlioz's work, and we cannot do better than quote his views on a subject which to many seems incomprehensible.

"The denomination of some wind instruments, based on the natural sound of their tube, has led to the most singular and absurd consequences; it has caused the art of writing for transposing instruments to become a very complicated task, rendering the musical vocabulary perfectly illogical. It is therefore high time to revert to this habit, and to establish some kind of order where we find so little existing.

Performers sometimes say, when speaking of the Tenor Trombone,—the Trombone in B $\flat$ ; in speaking of the Alto Trombone, the Trombone in E $\flat$ ; and still more frequently, in speaking of the usual Flute, the Flute in D. These designations are so far correct, that the tube of these two Trombones with the slide closed, give out the one, the notes of the chord B $\flat$ ; the other, those of the chord of E $\flat$ ; the usual Flute with its holes stopped and its keys closed, gives out equally the note D. But as performers pay no regard to this resonance of the tube, as they produce really the written notes, as the C of a Tenor Trombone is a C, and not a B $\flat$ ; as that of the Alto Trombone is still a C, and not an E $\flat$ ; as that of the Flute is also a C, and not a D, it evidently follows that these instruments are not, or are no longer in the list of *transposing* instruments; that they consequently belong to that of the *non-transposing* instruments; and that they are supposed to be in C, like Hautbois, Clarionets, Horns, Cornets and Trumpets in C; while no designation of key should be applied to them, or else give them that of C. This established, it will be seen of what importance it is, not to call the usual Flute, Flute in D; the other Flutes, higher than this one, having been designated according to the difference existing between their pitch, and that of the usual Flute, it has become the fashion—instead of saying simply tierce Flute, ninth Flute, which at least offers no confusion in the terms—to call these instruments, Flute in F, Flute in E $\flat$ . And to what does this lead? In a score, the small Clarinet in E $\flat$ , of which the C really makes E $\flat$ , can execute the same part as a third Flute, so called in F; and these two instruments bearing the names of different keys, are nevertheless in unison. The denomination of one or other must be false; and it is absurd to adopt solely for *Flutes* a mode of appellation and of designation of keys, different from that in use for *all other instruments*. Whence I conclude, that for Flutes, the old mode of designating them should be abolished: that the tierce Flute should no longer be called Flute in F; but Flute in E $\flat$ , since its C makes E $\flat$ ; nor ninth Flutes and minor second Flutes, Flutes in E $\flat$ ; but large or small Flute in D $\flat$ , since their C makes D $\flat$ ; and so on with all the other keys."

The tone of the Flute is soft and sweet in the lower portion of the scale, but the high notes are somewhat shrill and penetrating. The low tones of the "Bœhm" Flute are much more sonorous than those of the common Flute, and its peculiar mechanism renders it possible to execute passages with ease, which on the old Flute are very difficult.

Passages of great rapidity—staccato or legato—and embellishments of all kinds can be executed on the Flute. Shakes on a large portion of the scale are practicable; a few, however, are difficult or impossible:—



and all above this.

The Flute is used in various ways. It can be given solos, or melodies in unison or in octaves with other instruments, and often sustains the high notes of the harmony in the full orchestra. See examples 124, 128 and 129. An examination of the scores of good writers will illustrate the proper manner of treating Flutes better than pages of dry explanations. We give on the following page an example of a prominent Flute part which extends over nearly the entire compass of the instrument, and must refer the student for difficult examples to Rossini's Overture to "William Tell," and the Scherzo of the "Midsummer Night's Dream," music by Mendelssohn.



## OVERTURE: "LEONORE," No. 3. BEETHOVEN.

136.

*Allegro.* *Imo*

FLAUTI.

FAGOTTI.

1st VIOLIN.

2nd VIOLIN.

VIOLA.

CELLO AND BASSO.

*ppp cresc.* *fp*

*ppp cresc.* *fp*

*ppp cresc.* *fp*

*ppp cresc.* *fp*

*fp* *Imo* *Timpani.*

Flute

Bassoon

Violin

2 Violin

Viola

Cello

Bass

Handwritten musical score for Overture "Leonore" No. 3. The score is written on seven staves, each with a handwritten instrument label to the left. The staves are arranged in two systems of four staves each, with the seventh staff at the bottom. The notation includes various musical symbols such as clefs, key signatures, time signatures, and notes.

- Flute:** The first staff, featuring a treble clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Bassoon:** The second staff, featuring a bass clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Violin I:** The third staff, featuring a treble clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Violin II:** The fourth staff, featuring a treble clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Viola:** The fifth staff, featuring a treble clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Cello/Double Bass:** The sixth staff, featuring a bass clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.
- Tuba:** The seventh staff, featuring a treble clef and a key signature of one sharp (F#). It begins with a whole rest, followed by a series of eighth and sixteenth notes.

First system of musical notation. It consists of two staves at the top, likely for woodwinds or strings, featuring triplets and a piano (*p*) dynamic marking. Below these are four staves for the piano accompaniment, showing a variety of rhythmic patterns and chords.

Second system of musical notation. This system introduces several woodwind parts: Flute, Clarinet (labeled 'Clar't'), Horn in C (labeled 'HORN IN C.'), and Bassoon (labeled 'Basso.'). The piano accompaniment continues. Dynamics include *pp* (pianissimo) for the woodwinds and piano (*p*) for the piano. The Flute and Clarinet parts have melodic lines with slurs, while the Horn and Bassoon parts have more sustained notes.



## CHAPTER XXIII.

THE PICCOLO (*Ital.* Ottavino, or Flauto Piccolo; *Fr.* Petite Flûte; *Ger.* Kleine Flöte), is an octave above the common Flute, and its compass and system of fingering are the same. Its sounds are *an octave above* the written music. The lower tones are weak and the extreme high ones exceedingly acute and disagreeable, but in very loud passages where they are well covered up by other instruments, they often have a good effect. See the storm movement in Beethoven's Pastoral Symphony, where the Piccolo is introduced with wonderful effect; also the last movement of his Overture, "Egmont." The Piccolo is useful in the large orchestra to continue an ascending scale or passage which extends beyond the reach of the Flute:—

## "Le Dieu et la Bayadere." Auber.

**137.** *Andantino.*

PICCOLO.

FLAUTO.

OBOE.

CLARINET IN B $\flat$

VIOLINS 1. 2.

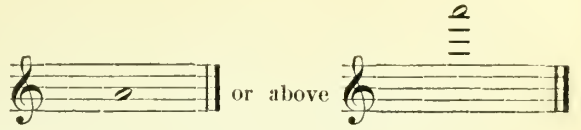
VIOLA.

BASSI.

The above if written out for Piano would give the following:—

**138.**

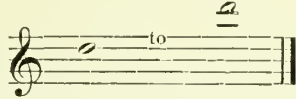
As a rule, there is no necessity for writing below



or above



The best part of the instrument is from

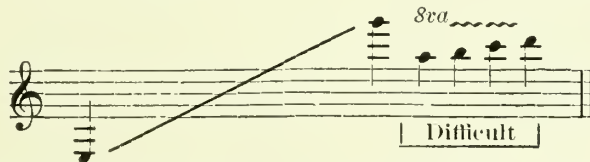


The custom of causing the Piccolo in

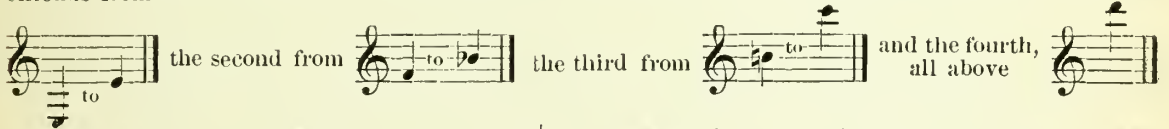
dance-music, to play the melody from beginning to end is detestable. The thin shrieking tone becomes terribly monotonous, and as Piccolos are not always played in tune, the result is extremely aggravating to a sensitive musical ear. It is a good plan to introduce suitable Piccolo passages in the Flute part, giving the performer time, by means of rests, to exchange instruments. This affords variety to the arrangement as well as relief to the ear.

## CHAPTER XXIV.

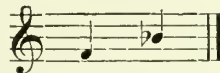
THE CLARINET, OR CLARINET, (*Fr.* Clarinette; *Ger.* Klarinette; *Ital.* Clarinetto.) This instrument is of wood, has a cylindrical tube, and is played by means of a single reed. It has a compass of about three octaves and a half, and the music is written in the Treble Clef. The whole chromatic scale from the low E to the high D is possible, but from the upper G to the D above, the notes come out with difficulty and uncertainty:—



For all practical purposes, G should be the limit in *forte*, and C in *piano* passages. Berlioz divides the scale of the Clarinet into four registers: the *low*, the *chalmereau*, the *medium* and the *high*. The first extends from



Some authors treat the scale from low E to Bb (comprising nineteen semi tones) as one register—the *chalmereau*. Each of these registers has its own peculiar quality of tone; that of the upper is rather harsh and piercing—good in *forte* passages or military music; the medium has something of a flute-like quality, but is rich and powerful—well adapted to melodies and to accompaniments of sustained tones or arpeggios. The notes of the second register from F to Bb:—



are weak and of rather a dull quality. Melodies requiring a soft, sweet tone, can be written for this part of the instrument with good effect:—

### 139.

### Overture: "Oberon." Weber.

Solo. *Allo con fuoco.*

CLARINET  
IN A.

2nd VIOLIN

VIOLA.

CELLO AND  
BASSI.



The lower register has a ready quality, the low holding notes being especially useful for dramatic effects:—

## 140.

## OVERTURE: "DER FREISCHÜTZ," WEBER.

*Adagio*

CLARIONETS IN B $\flat$ . *pp*  $\sharp\sharp$

BASSOON. *p*

TIMPANI IN C & A. *pp*

1st VIOLIN. *pp*  $\sharp\sharp$  *mf* *ff* *pp*

2nd VIOLIN. *mf* *ff* *pp*

VIOLA. *pp*  $\sharp\sharp$  *mf* *ff* *pp*

CELLO. *f* *pp* *arco*

BASSO. *pizz* *f* *pp*



No other wind instrument can compare with the Clarinet in its power to swell or diminish its tone. It can give a mere whisper or produce a volume of tone nearly equal to the Trumpet. For a specimen of good management in the application of the crescendo and diminuendo, see next example:—

## 141.

## OVERTURE: "DER FREISCHÜTZ." WEBER.

*molto vivace*

CLARINET IN B $\flat$

*ff* *con molto passione* *f*

CORNI IN E $\flat$

*ff* *fz* *fz*

CORNI IN C.

*ff* *fz* *fz*

TROMBONE BASSO.

*p*

1st VIOLIN.

*p* *mf* *p*

2nd VIOLIN.

*p* *mf* *p*

VIOLA.

*p* *mf* *p*

CELLO AND BASSO.

*p* *mf* *p*

2nd Horn in E $\flat$

*p* *fz* *fz*

Shakes on many notes of the scale are difficult, and on some impossible:—



and all above this.



Keys with many sharps or flats should be avoided as much as possible, especially in rapid movements. This we can do by using Clarionets in different keys. The Clarionets in common use are in  $E\flat$ , C,  $B\flat$  and A. In German,  $B\flat$  is called B, and  $B\sharp$  is H; therefore, it is called simply B Clarionet in German scores.

The  $E\flat$  Clarionet is used principally in military bands, but is sometimes used in large orchestras. See examples 124 and 128. Its sounds are a *minor third higher* than those of the Violin, or the Clarionet in C; consequently the music for it must be written a *minor third lower* to be in unison with those instruments:—

VIOLIN, OR  
CLARIONET IN C

142.

CLARIONET IN  $E\flat$

All Clarionets except the one in C, are *transposing instruments*; that is, they emit sounds different from the notes on paper.

The note C on paper played on an  $E\flat$  Clarionet, sounds  $E\flat$ : When

played on a  $B\flat$  Clarionet, sounds  $B\flat$ : and when on an A Clarionet, sounds A:

In short, C on a transposing instrument *always gives the key in which it is pitched*. Now, if we wish to arrange music in the key of  $B\flat$ , we use a  $E\flat$  Clarionet and write the music for it in C—one tone higher, because the  $B\flat$  Clarionet is pitched *one tone lower* than the Violins, or non-transposing instruments:—

VIOLIN.

143.

CLARIONET IN  $E\flat$

When the music is in A (three sharps), use an A Clarionet, and write its part in C—a *minor third higher*, because the A Clarionet is pitched a *minor third lower* than the Violin:—

VIOLIN.

144.

CLARIONET.

The general rule is to select the B $\flat$  Clarionet for music in flats, the A Clarionet for music in sharps, and the C Clarionet for music in C, G and F. There are, however, exceptions to this rule. The choice of a Clarionet may sometimes be governed by considerations other than the key—for instance, where certain low notes are to be played—thus, the lowest note of this passage:—



can only be reached by the Clarionet in A:—



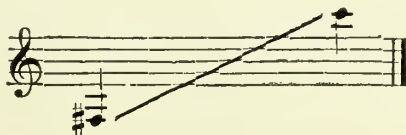
The C Clarionet cannot reach it by a third, and the B $\flat$  lacks a half-step of it. Then again, the character of the music may indicate the selection of a particular Clarionet. The C being the most sharp and shrill, would be best adapted to martial strains, providing the key would admit of its use. The B $\flat$  is regarded as the best of all the Clarionets for solos, and for such melodies as require much expression and purity of tone. The A is similar to the B $\flat$ , but a shade thicker in tone—lacking that limpid quality so characteristic of the B $\flat$ .

## CHAPTER XXV.

THE CORNET (*It.* Cornetto, *Fr.* Cornet à Pistons.) The natural resonance of its tube gives the following:—



The compass of the Cornet with three valves, is from low F $\sharp$  to upper C:—



with all the chromatic intervals. Some players can execute several notes above this, and Mr. Levy can play still another octave below the low F $\sharp$ , as well as a fifth above high C. The instrument we shall consider in this place, is the usual orchestra Cornet in B $\flat$ . Formerly Cornets were provided with crooks, or set-pieces for the keys of B $\flat$ , A, A $\flat$ , G, F, etc., but Cornets in B $\flat$  and A $\flat$  are the only ones now in general use in the orchestra. Some Cornets are made in C, but very little orchestra music is written for them.



They are useful to those who cannot transpose, in playing songs from the piano copy and in church music; but for orchestral use, the B♭ is a much better instrument. The pitch of the Cornet in B♭ is *one tone below* the Violin or Piano; therefore, the music for it must be written *one tone higher* than the music for the Violin. The Cornet in A is a *minor third below* the Violin, and the music must be written a *minor third higher* to be in unison. Precisely the same relations as to pitch exist between the Cornet and Violin, as between the Clarionet and Violin. Thus, this passage for the Violin:—



would have to be written *one tone higher* to give the same sounds on the B♭ Cornet:—



and for the A Cornet, a *minor third higher*:—



Now-a-days the Cornet is expected to supply the place of almost any instrument which happens to be absent. It has to do duty for the Horn, Clarionet, Oboe, and sometimes for the Bassoon and Trombone. Just why this particular instrument should be called upon to represent others which it does not in the least resemble, is hard to explain. The writer remembers an instance where the 2nd Cornet player in a first-class theatre was handed the 2nd Clarionet part in C, of the Overture to Norma, and asked to play sixteen measures from it—when the proper time came—in addition to his own part, which was made up from half a dozen other instruments. This process of fixing parts is called “condensing.” *Stuffing* would be a more appropriate term. Much of the foreign music—particularly that from Germany—is arranged for Trumpets in F, D, or E♭; consequently it often happens that Cornet players are required to transpose these parts at sight, few leaders of large orchestras taking the trouble to write them out in the proper keys for the Cornet. A Cornetist, therefore, transposes an F Trumpet part by using a B♭ Cornet and playing the music a fifth higher; thus, this part for the F Trumpet:—



must be played as if written for the B♭ Cornet, thus:—



If the Trumpet stands in E♭, the B♭ Cornet plays a *fourth* higher:—



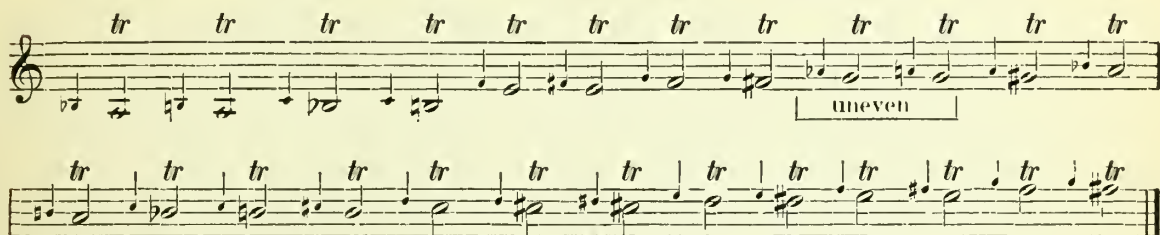
If the Trumpet stands in D, the A Cornet may be used, and the part transposed a *fourth* higher.

In the small orchestra the Cornet must of necessity figure more prominently than in the full band. It is given solos, ducts with other instruments, and helps to fill up the harmony by either holding or after-notes. The tendency, however, is to write too much for the instrument. There is no reason why it should occupy the most prominent place in the orchestra, for certainly it has no qualities which fit it to hold such a position. The constant use of all loud-toned instruments is too common, and should be condemned if for no other reason, because they give too much sameness to the arrangement. They should be held in reserve for passages requiring force, and for effects characteristic of them. Thus, the superb effect of the Clarionet solo in Ex. 139 would be lost if played on the Cornet. On the other hand, this passage:—



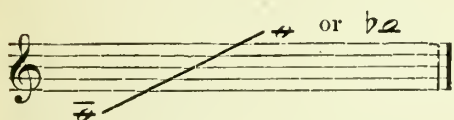
when executed on Cornets or Trumpets would give the proper effect; but if played on Oboes or Clarionets, would be entirely lacking in the fire and vigor which the character of the phrase demands. A good writer knows instinctively what is proper for the different instruments and when they should be introduced.

Good shakes can be made on the following notes:—

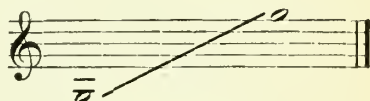


All above this are doubtful.

Notwithstanding the compass of the Cornet is said to be from low F $\sharp$  to high C, comparatively few performers can succeed in reaching these extreme notes at all times; therefore, it will be best when writing for the 1st Cornet not to go beyond this:—



and for the 2nd Cornet:



Many find it difficult to get out even these low notes—especially on poor instruments. The best keys for the Cornet are those having few flats or sharps at the signature. Aside from the difficulties of execution, the remote keys are not so well in tune. The same rule that was given for Clarionets will apply to Cornets—use the B $\flat$  Cornet for flat keys, the A Cornet for sharp keys.

## CHAPTER XXV.

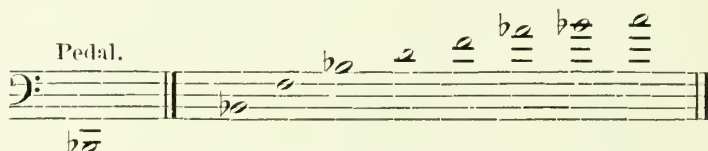
**THE TROMBONE** (*Ger.* Posaune; *Fr.* Trombone.) The Trombone is a *slide* instrument—the slide serving to lengthen the tube and enabling the player, by placing it in different positions, to execute the complete chromatic scale. There are three kinds of Trombones, viz: the Alto, Tenor, and Bass. In this country, the Alto and Bass are seldom seen, and the three Trombone parts are played on Tenor Trombones. This sometimes makes it necessary for the performer on the Alto part to play notes which are uncomfortably high; on the other hand, the Bass part often runs below the compass of the Tenor instrument, and notes an octave higher have to be substituted, with the possibility of ruining the idea of the composer. See Ex. 138, where the Bass Trombone has an E $\flat$  which is a half-step lower than the Tenor can reach. The same difficulty exists in France, but in England and Germany the three varieties may be met with in large orchestras. The Trombone in common use here is the B $\flat$  Tenor. Its compass is from:—



and the sounds are the same as the written notes. The following, called "pedals," can also be obtained:—



With its slide closed the Trombone gives, like all brass instruments, the natural harmonics of its tube:—



With every change of "position," a new series of tones similar to the above are produced. The following table gives the notes which can be made in each of the *seven* positions. The figures *under* the notes show *in what other positions* the same note can be made:—

**145.**

FIRST POSITION					SECOND POSITION				
Chord of B $\flat$					Chord of A				
B $\flat$	A	G	F	E	A	G	F	E	
6	5	4	4 6	3	7	6	5	7 4	

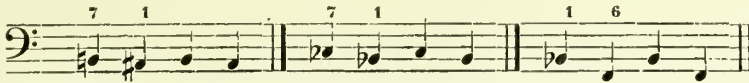
THIRD POSITION					FOURTH POSITION				
Chord of A $\flat$					Chord of G				
A $\flat$	G	F	E	D	G	F	E	D	
7	6	6	5	1	7	1	1 6	2	

FIFTH POSITION					SIXTH POSITION					SEVENTH POSITION				
Chord of G $\flat$ or F $\sharp$					Chord of F					Chord of E				
G $\flat$	F	E	D	C	F	E	D	C	E	D	C	B		
1	2	2 7	3		1	2	3	3 1 4		2	3	4 1 4 2 5		



The following notes should not be written in quick succession, the distance between the positions being too great to admit of very rapid changes :—

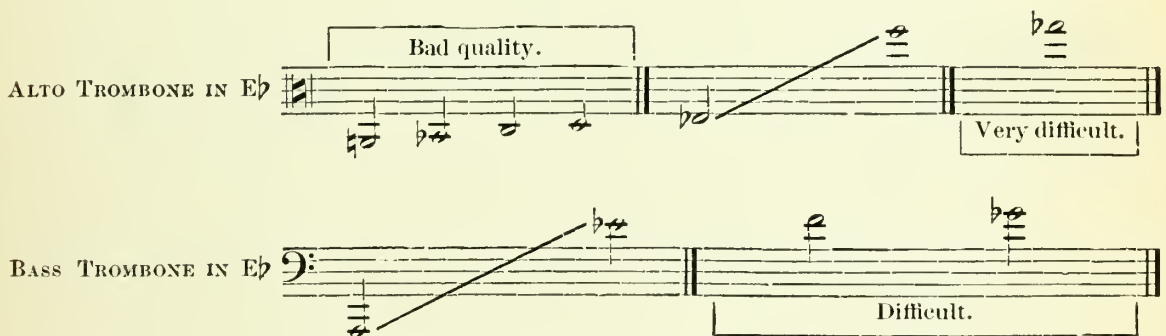


When writing for the Trombone, awkward passages may be avoided by consulting the above table of positions, and learning in which way the different notes may be played. Music for the Trombone is written in different ways; some authors using the Bass clef for all three Trombones, while others write the three parts on different staves, giving to each the proper clef—Alto, Tenor and Bass. Others, again write the 1st and 2nd on one staff in the Alto or Tenor clef, and the 3rd in the Bass clef. The following diagram from Prout's *Primer on Instrumentation*, will show the different ways in which the chord of C Major may be found written in different scores :—

146.



In the small orchestra the Trombone is used to strengthen the Bass, to play solo or in octaves with the Cornet, to help fill up chords of sustained tones in connection with the Cornets or Clarionets, and in many other ways which the character of the instrument hardly justifies; nevertheless, the prevailing fashion of getting as much *noise* as possible from a few instruments seems to sanction this abuse of one of the noblest instruments in the orchestra. In the grand orchestra it has its appropriate place as an individual and need not be called upon to do duty for others. In the military band its treatment differs from that in the orchestra, and will be discussed later. The Alto and Bass Trombones, not being used in this country, require no special treatment. The compass of each is given below :—



Shakes, made by the lips, can be executed on these notes with the Tenor Trombone :—



Only major shakes are made in this manner.

The Valve Trombone is often substituted for the one with a slide, but the music should always be written with reference to the peculiarities of the slide instrument. The Valve Trombone will be treated in Part III, under the head of "B♭ Tenor." Some stirring passages for the Trombones may be found in the overture to "William Tell." We give below an obligato passage for Trombones and Tuba, which for breadth and grandeur, can hardly be surpassed, and serves to bring out the wonderful power of the instrument to the best advantage :—

## 147.

## "FACKELTANZ," NO. 1.

MEYERBEER.

*Maestoso Marziale**8va**8va*FLAUTO  
E PICCOLO

OBOI

CLARINETTI  
IN B $\flat$ 

FAGOTTI

CORNI IN E $\flat$ TROMBA IN B $\flat$ TROMBONI  
TENOR E BASSO

TUBA

TIMPANI IN  
E $\flat$  F

TRIANGLE

TAMBOUR  
GRAND E PETITE

VIOLINO 1.

VIOLINO 2.

VIOLA

VIOLONCELLO  
ET BASSO

The musical score is written for 12 staves, each representing a different instrument. The key signature is three flats (B-flat, E-flat, A-flat) and the time signature is 3/4. The tempo is 'Maestoso Marziale'. The score is divided into four measures. The first measure is marked 'ff' (fortissimo). The second measure is marked 'ff' and '8va'. The third measure is marked 'ff' and '8va'. The fourth measure is marked 'ff' and '8va'. The Tuba and Trombone parts are marked 'ff molto pesante' and 'unison'.

The musical score is written for a large orchestra, featuring multiple staves. The key signature is three flats (B-flat, E-flat, A-flat), and the time signature is 2/4. The score is divided into two main sections, each marked with a wavy line and the word "Sra" above the staff. The first section begins with a forte (ff) dynamic marking. The music is characterized by dense, rhythmic patterns, including sixteenth and thirty-second notes, and frequent use of triplets. The second section also begins with a forte (ff) dynamic marking and continues with similar rhythmic complexity. The score includes various musical notations such as slurs, ties, and repeat signs, indicating a highly technical and dynamic piece.



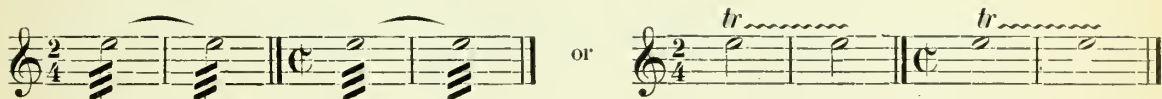
The musical score is arranged in a system of 15 staves. The first staff is a treble clef with a whole rest. The second through sixth staves are in 2/4 time, with a key signature of two flats (B-flat and E-flat). The second staff begins with a treble clef and contains a series of chords and eighth notes. The third and fourth staves continue this pattern with various chordal textures. The fifth staff is a bass clef with a melodic line featuring triplets. The sixth staff is also a bass clef, mirroring the melodic line of the fifth staff. The seventh staff is a treble clef with a whole rest. The eighth staff is a bass clef with a whole rest. The ninth staff is a treble clef with a melodic line. The tenth staff is a bass clef with a melodic line. The eleventh staff is a treble clef with a melodic line. The twelfth staff is a bass clef with a melodic line. The thirteenth staff is a treble clef with a melodic line. The fourteenth staff is a bass clef with a melodic line. The fifteenth staff is a bass clef with a melodic line. The score concludes with a double bar line and repeat dots.

## CHAPTER XXVII.

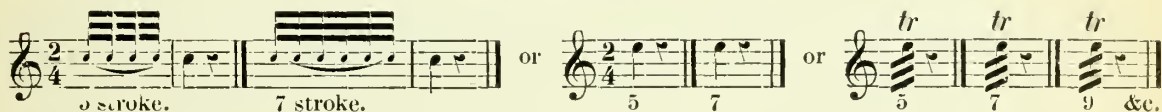
**THE SNARE, OR SIDE DRUM,** (*Ital.*, Tamburo Piccolo; *Fr.*, Tamburo Militaire, or Tambour Petite; *Ger.*, Kleine-Trommel.) This instrument is a cylinder of wood or brass, with heads of calf-skin tightened by means of cords and braces, or rods with screws. Across the "snare-head" a number of raw-hide strings called "snares" are stretched, which give a rattling sound when the batter-head is struck. The only production of the Snare Drum is *noise*, no definite *musical tone* being obtainable from it. It belongs properly to the military band, and, except in music of a martial character, is entirely out of place in the string orchestra. It is employed, however, in the smallest bands—probably on the score of economy, which calls for a big noise from a small number. We hold it to be our duty to warn the student against the continual use of this most irritating pest. In *street music*, let the drummers thump away to their heart's content, but in the string band, be careful to give them long rests—and *plenty of them*. The music for the Drum is written in the treble clef, on the C or E space. Sometimes, when the Bass Drum is also used, both parts are written on one staff, in the Bass clef, thus:—



Names are given to the different "beats," such as "rolls," "flams," "drags," "paradiddles," "flamadiddles," etc. The "long roll" is a rapid succession of strokes—two with each hand alternately, commencing with the left. It is written thus:—



There are also rolls of 5, 7, 9, 11, 13 and 15 strokes, written thus:—



The "flam" is merely a grace note, written thus:—



Space will not permit of a detailed description of all the Drum-beats in use and how to make them. The student will find but little difficulty in writing any Drum part he may desire, after examining those with which he may be familiar. Good examples of the use of this instrument will be found in Auber's overture to "Fra Diavolo," where the Drum begins with a solo twelve measures in length, and in Rossini's overture to "Gazza Ladra," which also commences with a Drum solo. See examples No. 147, 151 and 152.

## CHAPTER XXVIII.

**THE TRIANGLE.** As the Triangle is sometimes used in the small orchestra, it will be noticed in this place. The part is usually written in the treble clef, and the note placed on C. Single strokes, or rolls may be written for it. A too free use of the Triangle will destroy any good effect of which it is capable. It may be used to give effect to melodies of a certain kind, such as Gypsy music, and airs of a wild barbarous nature; or to emphasize a peculiar rhythm. It has been much used by Auber in his overtures, and is often heard in music for the ballet. Rossini has introduced it in the overture to "William Tell," and Haydn has employed it in his "Military Symphony" in connection with the Bass Drum and Cymbals.

## CHAPTER XXIX.

## ON SCORING FOR THE SMALL ORCHESTRA.

Having become sufficiently familiar with the instruments comprising the small orchestra, we now come to the most difficult part of our work—the application of our *theoretical* knowledge to *practical* use. Supposing the student to be competent to compose and harmonize a melody, or to harmonize any given melody, it will be next in order to attempt the task of instrumenting, or arranging it for any number of instruments which may be at his disposal. Assuming the small orchestra which we have been discussing in previous chapters to be available, we will first try our hand on some simple exercises that we may not discourage the beginner with too many difficulties at the outset. One of our old examples, say No. 110 from Part I, will do as well as any, and if the student has studied it, it will assist him in comprehending the distribution of parts in the score. Now, to give positive directions how to score any particular passage, would hardly be possible when we consider that no two musicians would be likely to arrive at exactly the same result in scoring a piece of music. And just here lies the great difficulty in teaching *how* to write for the orchestra. How is a student to decide what instruments to employ to give a desired effect, when he is ignorant of the effect which the instruments will produce? And how can a teacher explain to his pupil, something that—even if down on paper—cannot be heard, something purely imaginary? Fancy the absurdity of trying to explain the effect of a duett, played for instance, upon the Piccolo and Trombone, to a person who, possibly, never heard those instruments played upon. We may say that the one is very shrill and the other very sonorous, but that would not convey the idea of the *peculiar quality of tone* by which each is recognized; for other instruments may be shrill or sonorous, and not at all resemble the tone of the Piccolo or Trombone. To score well we must be able to select proper instruments for certain passages, and to *imagine* how they will sound when played in combination—in fact, we must hear it *in our mind* before we can put it on paper. Without this faculty of the imagination, scoring becomes a hap-hazard undertaking, with many (often unexpected) “original effects”—or defects.

To return to Ex. No. 110, we will give it the following arrangement, which does not differ materially from the original. A part has been added for the Clarinet which serves as a duett with the Violin, and the Cello has a part, made up from chord-tones, differing somewhat from the Bass for the sake of variety:—

148.

Tempo di mazurka

Sra

FLUTE *mf*

CLARINET IN E♭ *mf*

CORNETS IN B♭ *mf*

TROMBONE *p*

VIOLIN 1st *mf*

VIOLIN 2d *mf*

VIOLA *mf*

CELLO *pizz.*

BASSO *mf*



The Clarinet and Cornets in A might have been used in the above example, but the Bb instruments are preferable. Sometimes difficult passages may be avoided by using an instrument in a different key. Thus, the following passage for the Bb Cornet is troublesome on account of the cross-fingering; for the A Cornet it is easier but less brilliant:—

## 149.

CORNET IN B $\flat$

CORNET IN A

EFFECT

Many passages which are difficult of execution on the Clarionet may be played easily by taking a Clarionet in another key, whereby we get a different fingering; but a practical acquaintance with an instrument is necessary to gain much advantage in this way, for in trying to avoid one difficulty we might unwittingly create many others. When arranging the parts for the Second Violin and Viola, it is well to write the most essential notes in the Violin part, so that the absence of the Viola will not leave the harmony too thin.

For our next example we will take the following Piano score of a melody which is arranged as an introduction to a waltz from the "Chimes of Normandy":—

150. *Moderato.*

PIANO.

*mf* *dim.* *p* *rit.* *f* *p* *ff*

There is nothing in the above example which calls for more than the ordinary treatment—a simple melody with a plain accompaniment. Anything in the way of “orchestral effects” would attract attention from the melody and be out of place for a piece of this character. A musician of good taste and judgement will never be at a loss to know how to harmonize or instrument his melodies appropriately. As the arrangement on the following page is not the only one possible, the student should make scores for himself and compare them with it.



This page contains ten staves of musical notation, likely for an orchestra. The notation is written in D major (two sharps). The staves are arranged in two groups of five. The first group of five staves shows a variety of rhythmic patterns and dynamics, including *ff*, *f*, *p*, *mf*, *rit.*, and *rall.*. The second group of five staves continues the musical ideas, with similar dynamic markings and phrasing. The notation includes many slurs, ties, and accents, indicating a complex and expressive piece of music.



REMARKS ON EXAMPLE 151.—As the chromatic passage in the first two measures is to be played *legato*, the B's below it have been changed from quarter notes to a sustained tone for the Trombone. For a large orchestra, this passage could be arranged for two Clarionets and Horns, instead of Cornets and Trombone. The Clarionets would have the same notes now given to the Cornets, and the Horns would sound the sustained tone B of the Trombone, thus:—



This will be better understood by referring to the chapter on the Horn. In the third note of the second measure of the Viola part, an enharmonic change has been made by writing F $\sharp$  for E $\sharp$  to facilitate the fingering, but in the 2nd Cornet part the original note G $\sharp$ , (which *sounds* E $\sharp$ ) appears instead of A $\flat$  which it would be if transposed literally from F $\sharp$ . In the twelfth measure, the Cornets and Trombone are introduced to give increased accent and color to the discord. Compare the notes in the brass with those in the stringed parts, and also the harmony part of the strings with the Piano arrangement and note how the chords have been distributed.

The following example has been selected for the purpose of showing how a *full score* can be built up from a meagre Piano part by introducing duetts, imitations, sustained tones and the like. The Piano part is placed under the orchestral score that comparisons may be more easily made:—

**152.** "LABOR OF LOVE QUADRILLE." OSCAR COON.

No. 3.

FLUTE

CLARINET IN A

1st VIOLIN

2nd VIOLIN

VIOLA

CELLO

BASSO

Piano

The score is for a piece titled "LABOR OF LOVE QUADRILLE" by Oscar Coon, No. 3. It is in 6/8 time and has a key signature of one sharp (F $\sharp$ ). The score is divided into two systems, each containing eight measures. The first system starts with a key signature change from one sharp to two sharps (F $\sharp$  and C $\sharp$ ). The second system starts with a key signature change from two sharps to one sharp. The score includes various musical notations such as dynamics (p, f), articulation (accents), and phrasing slurs. The instruments listed are Flute, Clarinet in A, 1st Violin, 2nd Violin, Viola, Cello, Basso, and Piano.

*Sra ad lib.*

Col-1st-Violin

*f**f*

Cornets in A.

*f*

Trombone.

*f*

Drum.

*f**f**f**f**f**f**f*

"Labor of Love Quadrille."

A musical score for an orchestra, titled "Labor of Love Quadrille." The score is written for a full orchestra, including strings, woodwinds, and brass. The key signature is one sharp (F#), and the time signature is 2/4. The score is divided into two systems. The first system consists of ten staves, and the second system consists of two staves. The notation includes various musical symbols such as notes, rests, beams, and dynamic markings. The word "Sua" is written above the first staff of the first system. The score is arranged in a traditional orchestral format, with the woodwinds and strings in the upper staves and the brass in the lower staves.

*Sua*

"Labor of Love Quadrille."



Coda. 8va

This musical score is for the Coda section of the 'Labor of Love Quadrille'. It consists of ten staves. The first staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The second staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The third staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The fourth staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The fifth staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The sixth staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The seventh staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The eighth staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The ninth staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The tenth staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The score includes various musical notations such as notes, rests, and dynamic markings.

Coda.

This musical score is for the Coda section of the 'Labor of Love Quadrille'. It consists of two staves. The first staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The second staff is a bass clef with a key signature of one sharp (F#) and a dynamic marking of *ff*. The score includes various musical notations such as notes, rests, and dynamic markings.

"Labor of Love Quadrille."

*Trio.*

This musical score block contains the first Trio section, measures 1 through 12. It is written for a piano and features four staves. The key signature is one sharp (F#), and the time signature is 3/4. The first staff (treble clef) begins with a wavy line above the first measure. Measures 1-3 are marked with a piano (*p*) dynamic. Measures 4-6 are marked with a piano (*p*) dynamic. Measures 7-9 are marked with a piano (*p*) dynamic. Measures 10-12 are marked with a piano (*p*) dynamic. The second staff (treble clef) begins with a wavy line above the first measure. Measures 1-3 are marked with a piano (*p*) dynamic. Measures 4-6 are marked with a piano (*p*) dynamic. Measures 7-9 are marked with a piano (*p*) dynamic. Measures 10-12 are marked with a piano (*p*) dynamic. The third staff (treble clef) begins with a wavy line above the first measure. Measures 1-3 are marked with a piano (*p*) dynamic. Measures 4-6 are marked with a piano (*p*) dynamic. Measures 7-9 are marked with a piano (*p*) dynamic. Measures 10-12 are marked with a piano (*p*) dynamic. The fourth staff (bass clef) begins with a wavy line above the first measure. Measures 1-3 are marked with a piano (*p*) dynamic. Measures 4-6 are marked with a piano (*p*) dynamic. Measures 7-9 are marked with a piano (*p*) dynamic. Measures 10-12 are marked with a piano (*p*) dynamic.

*Trio.*

This musical score block contains the second Trio section, measures 13 through 16. It is written for a piano and features two staves. The key signature is one sharp (F#), and the time signature is 3/4. The first staff (treble clef) begins with a wavy line above the first measure. Measures 13-14 are marked with a piano (*p*) dynamic. Measures 15-16 are marked with a piano (*p*) dynamic. The second staff (bass clef) begins with a wavy line above the first measure. Measures 13-14 are marked with a piano (*p*) dynamic. Measures 15-16 are marked with a piano (*p*) dynamic.

"Labor of Love Quadrille."

D.S.  $\text{ƒ}$ 

The first system of the musical score consists of ten staves. The first staff is a treble clef with a key signature of one sharp (F#) and contains five measures of whole rests. The second staff is a treble clef with a key signature of one flat (Bb) and contains five measures of eighth and sixteenth notes. The third staff is a treble clef with a key signature of one flat (Bb) and contains five measures of eighth and sixteenth notes, starting with a piano (p) dynamic marking. The fourth staff is a bass clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The fifth staff is a treble clef with a key signature of one sharp (F#) and contains five measures of whole rests. The sixth staff is a treble clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The seventh staff is a treble clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The eighth staff is a bass clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The ninth staff is a bass clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The tenth staff is a bass clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes.

D.S.  $\text{ƒ}$ 

The second system of the musical score consists of two staves. The first staff is a treble clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes. The second staff is a bass clef with a key signature of one sharp (F#) and contains five measures of eighth and sixteenth notes.



REMARKS ON EXAMPLE 152.—To the 1st Violin has been given the melody entire, all four of the strains being good "Violin music." The chords on the Bass staff of the Piano part have been filled up by the 2nd Violin and Viola. Note the changes in the position of the chords, and the alterations in the Coda, as well as the preceding strain, where six notes in the measure are substituted for the after-notes of the Piano part for the purpose of getting greater power. The Cello has nearly the same part as the Bass until the Trio is reached, where it has an independent accompaniment for four measures, and then doubles the 1st Violin part in the octave below—playing from the Tenor clef. In the Coda will be found "Col Basso," which indicates that the Cello is to play *with the Bass*. In the first strain the Flute has a part made up from the harmony and some partial imitations of the Violin part. The Clarinet has various duties to perform in the way of assisting the Violin, filling up the harmony with sustained tones, and in the Trio it has a duett in sixths and thirds with the Violin. There is nothing to notice in the Cornet part except in the Coda, where there are some imitations of a figure from the 1st Violin and played also by the Trombone to give it more weight. In the Trio, the Trombone edges in more imitations of a Violin figure on the last half of the measure.

To most beginners, the idea of filling up a score with independent or counter-melodies is very fascinating, but there is great danger of overloading the parts so that the principal motive will not be heard distinctly. One good melody clearly set forth is worth a dozen labored mongrels made to fit certain conditions, and all striving to be heard simultaneously. To the individual who usually has nothing but after-notes to pump out, it is no doubt very delightful to find himself working away at a "tune" on his own account, but the average listener who has difficulty in following the thread of so many voices, concludes that some one must have "got out." Dance music and marches are seldom improved by crowding in counter-melodies at every opportunity. Good, brilliant melodies, well marked and not over-burdened with too many notes in a measure are most effective. Few instances of two real melodies moving at the same time can be found in any of Strauss' compositions, but his themes are beautiful and exactly suited to the purpose for which they were composed, and his instrumentation is exceedingly brilliant. The introduction of counter-melodies would tend to destroy the light and graceful style for which his music is so remarkable. When scoring music of a higher order, the student will be free to show how much (or how little) he knows of the mysteries of Counterpoint and Fugue. He will then, no doubt, find the small orchestra much too diminutive for his purpose, and the MODERN GRAND ORCHESTRA—Drums, Cymbals, and all—will hardly be adequate to sufficiently represent the colossal ideas to which his teeming brain will give birth!

We give next a portion of a Galop, placing the Piano arrangement beneath the score for the purpose of comparison.

## GALOP: "HAPPY-GO-LUCKY."

OSCAR COON.

*Introduction.*

153.

PICCOLO

CLARINET  
IN B $\flat$ 1st CORNET  
IN B $\flat$ 2nd CORNET  
IN B $\flat$ 

TROMBONE

DRUM

1st VIOLIN

2nd VIOLIN

VIOLA

CELLO

BASSO

Piano.

*ff* *sf*

*ff* *sf*

*ff* *ff* *sf*

*ff* *ff* *sf*

*ff* *ff* *sf*

*ff* *ff* *sf*

*ff* *sf*

*ff* *sf*

*ff* *sf*

*ff* *sf*

*ff* *sf*

*ff* *sf*

*Introduction.*

*ff* *sf*

*Galop.*

*p*

*p*

*p*

*p*

2nd time.

Triangle.

*p*

*p*

*p*

*p*

*p*

*p*

*Galop.*

*p*



A musical score for a piece titled "Galop: 'Happy-Go-Lucky.'" The score is arranged for a full orchestra, featuring ten staves. The top five staves are for woodwinds and brass: Flute (treble clef), Oboe (treble clef), Clarinet (treble clef), Bassoon (treble clef), and Horn (bass clef). The bottom five staves are for strings and percussion: Violin I (treble clef), Violin II (treble clef), Viola (treble clef), Cello (bass clef), and Double Bass (bass clef). A drum part is indicated by a "Drum" label above the fifth staff from the bottom. The music is in 2/4 time, with a key signature of one sharp (F#). The score is marked with a forte "f" dynamic. The piece consists of two main sections, each with a first ending (marked "1") and a second ending (marked "2"). The first section ends with a repeat sign, and the second section also ends with a repeat sign. The notation includes various musical symbols such as notes, rests, beams, and slurs, indicating a lively and rhythmic composition.

Galop: "Happy-Go-Lucky."



The musical score is arranged in two systems. The first system consists of ten staves. The first five staves are in treble clef, and the last five are in bass clef. The key signature has one sharp (F#). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. Dynamic markings include *mf* (mezzo-forte) and *nf* (nearly forte). The second system consists of two staves, also in treble and bass clef, continuing the musical piece. The overall style is characteristic of 19th-century orchestral music.

Galop: "Happy-Go-Lucky."



The first system of the musical score consists of ten staves. The first staff is a treble clef with a key signature of one sharp (F#) and a dynamic marking of *mf*. It contains a melodic line with eighth and sixteenth notes. The second staff is a treble clef with a key signature of one sharp, continuing the melody. The third staff is a treble clef with a key signature of one sharp, continuing the melody. The fourth staff is a treble clef with a key signature of one sharp, continuing the melody. The fifth staff is a bass clef with a key signature of one sharp, continuing the melody. The sixth staff is a treble clef with a key signature of one sharp and a dynamic marking of *mf*, containing a melodic line with eighth and sixteenth notes. The seventh staff is a treble clef with a key signature of one sharp, continuing the melody. The eighth staff is a treble clef with a key signature of one sharp, continuing the melody. The ninth staff is a bass clef with a key signature of one sharp, continuing the melody. The tenth staff is a bass clef with a key signature of one sharp, labeled "Col Cello.", and contains a sustained chord.

The second system of the musical score consists of two staves. The first staff is a treble clef with a key signature of one sharp, continuing the melody. The second staff is a bass clef with a key signature of one sharp, continuing the melody.

Galop: "Happy-Go-Lucky."

[illegible]

The musical score for 'The Song of the Lark' is presented in two systems. The first system consists of a single staff with a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. It contains eight measures of music, primarily composed of eighth and sixteenth notes. The second system consists of two staves, both with a bass clef and a key signature of one sharp. The first measure of the second system is marked with a fermata. The second measure is marked with a crescendo hairpin. The third measure is marked with a sforzando (*sf*) dynamic. The fourth measure is marked with a fortissimo (*ff*) dynamic. The remaining measures of the second system continue the melodic and harmonic progression. The score is printed in a classic, slightly aged font style.

Galop: "Happy-Go-Lucky."

**REMARKS ON EXAMPLE 153.**—In the introduction the brass instruments and the Double-bass are held in reserve for the heavy chords of the second and fourth measures in order to get a strong contrast to the unison of the first and third measures. In the fifth, and following bars, the full force on the dominant chord is put on. In the fourth and eighth bars of the second strain of the galop, scale passages have been written for the Piccolo, Clarinet, and Cello, which do not appear in the Piano part. They are introduced to enliven the somewhat monotonous melody which is composed almost entirely of quarter notes. Something sprinkled in occasionally here and there to relieve a melody of this character, has a good effect and gives a sort of finishing touch to the arrangement. The last sixteen measures have something independent for the Piccolo; and some slight deviations are made from the Bass staff of the Piano part for the purpose of working up a better part for the different instruments. The student should be careful to observe how the *harmony* is transferred from the Piano to the 2nd Violin and Viola. It is not always possible, or desirable to give the chords the same *position* in the orchestra that they have in the Piano arrangement. The position of chords is very often due to the technical peculiarities of the instruments for which they are written; thus, this chord:—



which a violinist can play with only three fingers, would require the use of both hands on a Piano. Suppose we should find the following chord for Piano, which we wish to write for a Violin and Viola:—



We could not give the full chord in the above position, for the Violin can sound but one of the intervals at a time—either A or C—and the Viola cannot make the D if it sounds F♯; therefore we are forced to change the chord to a higher position, if we would have all the intervals represented, thus:—

The above example will make it plain, that in all chords of the seventh where the highest note is C♯ or D♭ below the staff, the full chord cannot be given on the above mentioned instruments; because, as already explained in Chapter XVIII, no double notes can be played on the Violin where the *upper note* is lower than D—third string open. The chords of the diminished seventh often prove troublesome to those not familiar with the stringed instruments, and a few examples in different positions may be of some assistance. Notice the enharmonic changes:—

## 154.



The image displays two systems of musical notation. Each system includes a piano part (grand staff) and an orchestral part (bass staff). The piano part consists of a treble staff and a bass staff. The orchestral part is a single bass staff. In the first system, the piano part features a melody in the treble and accompaniment in the bass. The orchestral part provides harmonic support with chords. Above the first two measures of the orchestral part, the word "or" is written above a chord, indicating an alternative orchestration. The second system follows a similar pattern with different musical material.

Arrangements from *full orchestral scores* are often required, and to do this well it is necessary to have some idea of all the instruments included in the Grand Orchestra. Among them are a number which we have not yet studied. However, by the aid of a few explanatory remarks regarding these instruments, with what we already know, we may make the experiment. In "condensing" music for the small orchestra, we should endeavor to retain all the principal features and keep as near the original as possible. We will take for an example the score on the following pages (which is here given for a *full orchestra*), and make from it a score for a *small band*. The transposing instruments in this score (which we have not already fully treated) are the  $E\flat$  Clarinet, whose sounds are a *minor third above* the written note; the F Horns, which sound a *fifth lower* than the note on paper; and the F Trumpets, which sound a *fourth higher*. The Oboe, Fagotti and Tuba sound as written.

## 155.

## Walzer No. 1. "AUS DEN BERGEN" WALZER.

J. STRAUSS.

FLAUTO *pp* *ff* *sva*

PICCOLO *ff* *sva*

OBOI *pp* *ff*

1st CLARINETTO IN E $\flat$  *pp* *ff*

2nd CLARINETTO IN B $\flat$  *pp* *ff*

FAGOTTI *pp* *ff* *ff*

1st & 2nd CORNI IN F *pp* *ff* *ff*

3rd & 4th CORNI IN F *ff* *ff*

1st & 2nd TROMBE IN F *ff*

TROMBONE E TUBA *ff* *tr* *tr*

TIMPANI IN E $\flat$  & B $\flat$  *ff* *ff*

TAMBURO PICCOLO 1 2 3 4 5 6 7 8 *ff* 9 10 *ff* 11 12

1st VIOLINO *pp* *ff*

2nd VIOLINO *pp* *ff*

VIOLA *pp* *ff*

VIOLONCELLO *pp* *ff*

BASSO *pp* *ff* *ff*

[illegible]



Col-1st Violins

*ff*

*ff*

*ff*

*ff*

*ff*

*ff*

*tr*

*pp*

*ff*

22 23 24 25 26 27 28 29 30 31

*cres.*

*ff*

*cres.*

*ff*

*cres.*

*ff*

*cres.*

*ff arco.*

*ff*

Musical score for "Aus den Bergen" Walzer, measures 32 through 40. The score is written for a full orchestra, including strings, woodwinds, and brass. The key signature is B-flat major (two flats). The tempo is marked "Walzer". The score includes dynamic markings such as *ff* (fortissimo), *p* (piano), and *pp* (pianissimo). The section from measure 32 to 40 is marked with measure numbers above the staves.

"Aus den Bergen" Walzer.

Musical score for "Aus den Bergen" Walzer. The score is written for a full orchestra, including strings, woodwinds, and brass. The key signature is one flat (B-flat), and the time signature is 3/4. The score is divided into measures, with measure numbers 41 through 50 indicated at the bottom.

The score features several dynamic markings, including *ff* (fortissimo) and *pp* (pianissimo). The woodwind section includes parts for Flute, Clarinet, and Bassoon. The brass section includes parts for Trumpet, Trombone, and Tuba. The string section includes parts for Violin, Viola, Cello, and Double Bass.

The score is written in a standard musical notation style, with notes, rests, and other musical symbols. The bottom of the page includes the title "Aus den Bergen" Walzer.



This image shows a page of musical notation for a piano piece. The notation is written on multiple staves, including treble and bass clefs. The music features various note values, rests, and dynamic markings such as *p* (piano), *ff* (fortissimo), and *pp* (pianissimo). There are also articulation marks like accents and slurs. A section of the music is numbered 51 to 60. The page is a scan of a printed musical score.

REMARKS ON EXAMPLE 155.—During the first eight measures, the 1st Violin and 1st Horn carry the melody in unison, the Cello taking it an octave lower. A very striking effect in the way of an accompaniment is obtained from the upper reed instruments and Flute, by alternating quarter rests with quarter notes, while in strong contrast to this regular pulsation, we have the holding notes of the Fagotti and 2nd Horn. The harmony begins on the dominant with an organ-point on the tonic which is maintained to the sixteenth measure, the harmony changing every two bars from dominant to tonic. The general effect of the whole passage is exceedingly fine. In the seventeenth bar an abrupt change of key occurs with the most brilliant effect. After the sixteenth bar (in  $E\flat$ ), the dominant of B major appears ( $F\sharp$ ,  $A\sharp$ ,  $C\sharp$ ,  $E\sharp$ ) for six measures, reaching the tonic ( $B$ ,  $D\sharp$ ,  $F\sharp$ ) on the twenty-third measure. The return to the original key ( $E\flat$ ) is very nicely managed through an enharmonic change in the melody, bars twenty-five and twenty-six in sharps being the same, with the exception of one note ( $E\sharp$  in twenty-five to  $F$  in twenty-seven), as bars twenty-seven and twenty-eight in flats. The student having thoroughly studied the whole example, we will now examine it with a view to arranging it for the small orchestra.

In the first eight measures the parts which will remain the same as in the full score, are the 1st and 2nd Violins, Viola, Double-bass and Flute. The pretty effect of the reed instruments—spoken of above—cannot be given properly by our small orchestra for want of a sufficient number of instruments of that class. A Flute and Clarinet only are rather too thin, but they must suffice. Should we add the Cornets to fill up the harmony, they would destroy the balance, being too loud to blend well with the Flute and Clarinet in a *pianissimo* passage; besides, we shall need them to help us out with the brass parts. The low sustained  $F$  of the 2nd Horn (which sounds the  $E\flat$  on the 2nd line of the Bass staff) will have to be written for the Trombone, and the low  $E\flat$  of the 2nd Fagotto, *must* be taken by the Cello, as no other instrument in the small orchestra (Double-bass excepted) can reach so low. The 1st Fagotto part can be played by the 2nd Cornet, but unless both the Cornet and Trombone play *ppp*, they will cover up the  $E\flat$  of the Cello, and as this  $E\flat$  is the tonic, it should be quite as prominent as the  $E\flat$  of the Trombone. The 1st Horn part—if played at all with this arrangement—will have to be given to the 1st Cornet, although its tone is much too loud to give the required effect. Possibly we might come nearer to the original by omitting the Cornet, and giving the Cello its regular part, but as we wish to have the aforesaid  $E\flat$  represented and also the 1st Horn, we must dispense with the original Cello part.

In order to strengthen the melody in bars, nine, ten, eleven and twelve, it has been given to the Clarinet, and the notes which that instrument had in the full score have now been given to the 2nd Cornet, while the 1st Cornet has  $C$  (the  $F$  in the Trumpet part) sounding  $F\flat$ . Notice the changes in the six measures beginning with the seventeenth, where the low  $B\sharp$  of the 2nd Horn (sounding  $E\sharp$ ) has been written for the Clarinet, and the  $F\sharp$  of the Fagotto has been transferred to the Trombone. The 1st Cornet has the original  $B\flat$  Clarinet part in bars nineteen, twenty, twenty-three and twenty-four. The  $C$  for the 2nd Cornet (bars nineteen and twenty) is transposed from the 2nd Trumpet's  $F$ . Strictly considered, this  $F$  should have been written  $E\sharp$ , as the note in the string-parts from which it was transposed is  $A\sharp$ —(see 2nd Violin part.) This would have given us  $F\sharp$  instead of  $C$  for the Cornet. The reason for these enharmonic changes is, that they make the reading easier;  $F$  or  $C$  looking simpler than  $E\sharp$  or  $B\sharp$ . See bars twenty-three and twenty-four of the Clarinet part, where  $F\sharp$  is used in place of  $E\sharp$ , and bars twenty-seven and twenty-eight, where the 1st Violin and Viola parts are written in flats, while the 2nd Violin and Basses are in sharps. To better prepare for the sudden change from the chord of  $B\sharp$  in bar twenty-eight to  $E\flat$  in bar twenty-nine, the connecting tone,  $D\sharp$ , was changed to  $E\flat$ . The student is advised to compare the following example *bar by bar and note for note* with example 155, and endeavor to discover for himself where and why alterations have been made, and trace the notes of the transposing instruments back to the corresponding tones of the string or non-transposing instruments. On the following page is the score for the small orchestra condensed from example 155.

156.

FLUTE

Flute staff with treble clef, key signature of two flats (B-flat and E-flat), and 3/4 time signature. The staff contains musical notation with dynamics *pp*, *ff*, and *pp*. A wavy line above the staff is labeled *Solo*.

CLARINET  
IN B $\flat$ 

Clarinet staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp*, *ff*, and *pp*.

CORNETS  
IN B $\flat$ 

Cornets staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp*, *ff*, and *pp*.

TROMBONE

Trombone staff with bass clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp*, *ff*, and *pp*.

SIDE DRUM

Side drum staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *ff* and *ff*. Measure numbers 1 through 17 are indicated below the staff.

1st VIOLIN

1st Violin staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp* and *ff*.

2nd VIOLIN

2nd Violin staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp* and *ff*.

VIOLA

Viola staff with treble clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp* and *ff*.

CELLO

Cello staff with bass clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp* and *ff*.

BASSO

Bass staff with bass clef, key signature of two flats, and 3/4 time signature. The staff contains musical notation with dynamics *pp*, *ff*, and *pp piz.*



Col 1st Violin

Measures 18-30. The score is written for the first violin. The key signature is one flat (B-flat). The time signature is 4/4. The music features a melodic line with various dynamics and articulations. Measure numbers 18 through 30 are indicated at the top of the staves. Dynamics include *pp*, *cres.*, *ff*, *f*, and *pp* *cres.*. The notation includes slurs, ties, and various note values.

Violin I

Col 1st Violin

Measures 31-44. The score is in G major (one sharp) and 4/4 time. It features a variety of dynamics including *ff* (fortissimo), *f* (forte), *f/...*, *p* (piano), *pp* (pianissimo), and *ff* again. The music includes sixteenth-note runs, eighth-note patterns, and sustained chords. There are several fermatas and slurs indicating phrasing. The measure numbers 31 through 44 are printed below the staff.

This musical score page contains measures 45 through 60 of an orchestral piece. The notation is arranged in two systems of staves. The first system includes staves for strings (marked '8va'), woodwinds, and brass. The second system includes staves for strings, woodwinds, and brass. The score features various musical notations including notes, rests, and dynamic markings such as *ff* (fortissimo), *p* (piano), and *pp* (pianissimo). A crescendo hairpin is visible in the first system. Measure numbers 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, and 60 are printed below the staves. The key signature is one flat (B-flat), and the time signature is 4/4.



For the concluding example, we give in full the following Póka Mazurka. To save space, the first strain is not printed in full when the same passage occurs the second time, but the copyist is required to insert the part between *A* and *B* at the place designated. A similar case also occurs after the second strain of the Trio. The student will find it greatly to his advantage to score pieces from the Piano copy, and then compare his score with the original orchestral arrangements. He will thus be enabled to see at a glance how near he has come to the author's idea, and at the same time fix in the memory many useful bits of information regarding the art of instrumentation.

**“PSYCHE” POLKA MAZURKA.**

157.

OSCAR COON.

[illegible]

8vd

**B.**

*arco*

Drum.

"Psyche" Polka Mazurka.

This musical score is for the piece "Psyche" Polka Mazurka. It features ten staves of music. The first staff is for Violins I, marked with a wavy line and a wavy line above it, and a wavy line below it. The second staff is for Violins II, marked with a wavy line and a wavy line above it. The third staff is for Violas, marked with a wavy line and a wavy line above it. The fourth staff is for Cellos, marked with a wavy line and a wavy line above it. The fifth staff is for Double Basses, marked with a wavy line and a wavy line above it. The sixth staff is for Drums, marked with a wavy line and a wavy line above it. The seventh staff is for Flutes, marked with a wavy line and a wavy line above it. The eighth staff is for Clarinets, marked with a wavy line and a wavy line above it. The ninth staff is for Bassoons, marked with a wavy line and a wavy line above it. The tenth staff is for Horns, marked with a wavy line and a wavy line above it. The score includes various musical notations such as notes, rests, and dynamic markings.

This musical score is for the piece "Psyche" Polka Mazurka. It is arranged for a full orchestra, with parts for strings, woodwinds, and brass. The score is written in 3/4 time and features a key signature of one sharp (F#). The instrumentation includes:

- Violins I & II:** Both parts are marked *ff* (fortissimo) and feature a wavy line at the beginning, indicating a tremolo or rapid oscillation.
- Violas:** The part is marked *ff* and includes a wavy line at the beginning.
- Celli:** The part is marked *ff* and includes a wavy line at the beginning.
- Bass:** The part is marked *ff* and includes a wavy line at the beginning.
- Flutes:** The part is marked *ff* and includes a wavy line at the beginning.
- Oboes:** The part is marked *ff* and includes a wavy line at the beginning.
- Clarinets:** The part is marked *ff* and includes a wavy line at the beginning.
- Bassoons:** The part is marked *ff* and includes a wavy line at the beginning.
- Trumpets:** The part is marked *ff* and includes a wavy line at the beginning.
- Trombones:** The part is marked *ff* and includes a wavy line at the beginning.
- Tuba:** The part is marked *ff* and includes a wavy line at the beginning.
- Snare Drum:** The part is marked *ff* and includes a wavy line at the beginning.
- Cymbals:** The part is marked *ff* and includes a wavy line at the beginning.

The score is written in a standard musical notation with a grand staff for each instrument. The key signature is one sharp (F#). The time signature is 3/4. The piece is in 3/4 time. The score is marked *ff* (fortissimo) throughout. The piece is titled "Psyche" Polka Mazurka.



**To Coda**

**Trio.**

**COPY FROM "A" TO "B"**

**"Psyche" Polka Mazurka.**

[illegible]





## CHAPTER XXX.

## THE GRAND ORCHESTRA.

If we compare the orchestral scores of a century ago with those of the present day, we are struck by the greater number of instruments now employed, as well as the more difficult and complicated nature of the music. Good old "Father Haydn" could express his ideas with two Flutes, two Oboes, two Horns, two Bassoons, two Trumpets, a pair of Kettle Drums, and the usual string quartette. The Clarionet had not yet come into general use. Beethoven, still later, wrote some of his finest orchestral works for the same instruments, only with the addition of Clarionets. The modern composer demands three or four of each of the above-mentioned wind instruments, besides English Horn, Bass Clarionets, Contra Bassoons, Harps, Trombones, Tubas, extra Cornets and the whole force of the percussion department—Drums, Cymbals, Gongs, Triangles, Bells, Xylophones, and other instruments of torture. To properly balance the mass of sound from so many loud-toned instruments, about eighty stringed instruments are necessary. In the olden time, simple melodic forms, delicately shaded, with but little effort towards orchestral effects, were in vogue. Now, harmonic combinations of great complexity, striking melodies written with special reference to the instruments upon which they are to be performed, with strong contrasts of instrumental coloring and skillful management of light and shade, are the prevailing characteristics of orchestral music. No doubt many will contend that Haydn and Mozart wrote much better music than any of our modern composers. If that be true, we must acknowledge that while all the other arts and sciences have progressed, music alone has stood still. Beethoven, who came after Haydn and Mozart, was thoroughly hated because of his many daring innovations in composition as well as in orchestration. He has himself said that the music teachers of Vienna were his mortal enemies. No one now denies that he developed orchestral music to a wonderful degree. Berlioz has but recently had a fair hearing in his native country where he, during his life-time, was ridiculed for his "crazy" music. But now, when dead and gone, they are ready to do him honor.

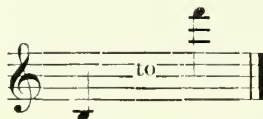
Modern improvements and additions to the orchestra have led to a corresponding development of musical ideas, until now, the limit of orchestral resources seems to have been nearly reached. Richard Wagner, without doubt the greatest living master of instrumentation, has taxed every instrument to its utmost. He has sounded them from their "lowest note to the top of their compass," made them breathe a zephyr or blow a hurricane, caused them to give "sweet sounds long drawn out," or rush with the speed of lightning—in short, every thing which human endurance and mechanical skill has made possible on musical instruments he has succeeded in drawing from them. In consequence of this, his enemies accuse him of creating many difficulties and much noise. However that may be, he has written much music which can hardly be surpassed. What can excel the ethereal beauty of the introduction to his *Lohengrin*, or the massive grandeur of his *Tannhauser Overture*? Although he may be regarded as a mere charlatan—a musical maniac, by those who have not the ability to appreciate his music; still, the time is not far distant when his genius will be universally admitted.

It is hoped that these remarks will induce the student, who wishes to master this subject, to examine for himself the scores of *all* the great composers; beginning with Haydn, then Mozart, Weber, Beethoven (whose sublime creations can be studied with profit for a life-time), Schubert, Schumann, Mendelssohn, Berlioz, Brahms, Raff, Rubenstein, Liszt and Wagner. A careful study of the works of these masters will do more to bring the student to a "realizing sense" of the wonderful strides which have been made in musical composition and orchestration than volumes of dry argument.

In addition to the instruments which have been treated under the head of the "Small Orchestra," the grand orchestra of the present day includes the Oboe, English Horn, Bassoon, Horn, Trumpet, Tuba, Timpani, Bass-Drum and Cymbals, and sometimes the Contra-Bassoon, Bass Clarionet, Harps, Bells and Xylophone.

## CHAPTER XXXI.

THE OBOE (*Ger.* Hoboe, *Fr.* Hautbois; sometimes written Hautboy). This instrument has a conical bore and is played by means of a double reed. The music for it is written in the treble clef, and the sounds are the same as the written notes. It has the following compass with all the chromatic intervals:—



but  $E\flat$  should be the upward limit for orchestral writing. Some Oboes have a low  $B\flat$ ,

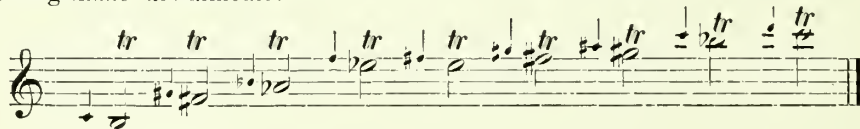


but as this is not always the case it is better as a rule to abstain from writing it. Mendelssohn has written a low  $B\flat$  in the intermezzo of the "Midsummer Night's Dream" music. The best part of the instrument is from G to  $E\flat$ :—



Its tone in the medium is sharp and cutting—it may be called "acid-sweet"—but the lower portion of the scale has a thin nasal quality which is not particularly agreeable. The extreme upper notes are harsh and shrill. Like most wind-instruments, the keys with few flats or sharps are easiest for the Oboe. Rapid passages are not so effective as simple melodies, which may be either of a gay or plaintive character. Berlioz says "Candor, artless grace, soft joy, or the grief of a fragile being, suits the Hautboy's accents. \* \* \* A certain degree of agitation is also within its powers of expression." Arpeggios, which on the Clarinet are of excellent effect, are unfit for the Oboe.

The following shakes are difficult:—



These are impossible:—



and all above this.

Sustained tones are very effective on the Oboe, see Example 129, where it first sustains C, and afterwards is made to answer the Violins with charming effect. The cutting quality of its tone enables this answer to be distinctly heard, notwithstanding the mass of sound opposed to it from the whole orchestra. In Example 167 is a sustained tone (E) for the Oboe, which, on account of the nasal quality peculiar to this part of the instrument, lends additional grotesqueness to the general effect. The happy use of the grace note ( $F\sharp$ ) should not be overlooked. See Examples 163, 164 and 165, where the Oboe is doubled with the Flute and Bassoon. Example 155 has an effective Oboe part. In tutti passages the Oboe often doubles the melody with the Violins and other instruments. Examples of a conspicuous use of the Oboe may be found in any of Beethoven's Symphonies, where it is made to express the gayest as well as the saddest emotion. The following examples, each different in character, are given as specimens well suited to the Oboe:—

158.

## Pastoral Symphony. Beethoven.

*Allegro*

OBOE

1st solo

BASSOONS

2nd solo

VIOLINS

*dim.*

*pp*

*dim.*

*pp*

*pp*

*pp*

Clarionet in B $\flat$



## 159.

## Eroica Symphony. Beethoven.

Marcia Funèbra

Adagio assai

OBOE *p* *decres* *p*  
 CLAR. IN B $\flat$  *p* *decres* *p*  
 FAGOTTI *p* *decres* *p*  
 CORNI IN C *p* *decres* *p*  
 CORNO 3rd IN E $\flat$  *p* *decres* *p*  
 TIMPANI IN C, G *pp*  
 1st VIOLIN *pp* *cres* *decres* *p*  
 2nd VIOLIN *pp* *cres* *decres* *p*  
 VIOLA *pp* *cres* *decres* *p*  
 CELLO AND BASS *pp* *cres* *decres* *p*

160.

## Symphony in C, Schubert.

*Andante.*

OBOE

1st VIOLIN

2nd VIOLIN

VIOLA

BASSI

161.

## LOHENGRIN, Act III, Introduction.

WAGNER.

*Allo molto*

FLUTES

1

2

3

OBOI

1

2

3

CLARIONETS

IN A

1

2

3

FAGOTTI

1

2

3

IN G

1

2

IN D

3

4

The musical score is arranged in ten staves. The first five staves are for woodwinds: Flute 1 (treble clef, key of D major), Flute 2 (treble clef, key of D major), Oboe (treble clef, key of D major), Clarinet (treble clef, key of D major), and Bassoon (treble clef, key of D major). The next three staves are for strings: Violin 1 (treble clef, key of D major), Violin 2 (treble clef, key of D major), and Viola (treble clef, key of D major). The final two staves are for Cello (bass clef, key of D major) and Bass (bass clef, key of D major). The vocal part, labeled 'Lohengrin', is written in the bottom staff in bass clef, key of D major. The score includes various musical notations such as notes, rests, and dynamic markings.

Dynamics and performance markings include: *p* (piano), *mf* (mezzo-forte), *dim* (diminuendo), *pizz* (pizzicato), and *dol* (dolce). The vocal part is marked with *p* and *pizz*.

The vocal part is labeled 'Lohengrin' at the bottom. The string parts are labeled '1st VIOLIN', '2nd VIOLIN', 'VIOLA', 'CELLO', and 'BASSO'.



*mf* *dim* *p*

*mf*

*mf* *dim* *p*

*mf* *dim* *p*

*p*

*mf* *p* *p*

*mf* *dim* *p* *p*

*mf* *p* *p*

*mf* *p*

*p*

*p*

*p*

*p*

*p* *pizz*

*p*

Lohengrin.

## CHAPTER XXXII.

The **ENGLISH HORN**, (*Fr.* Cor. Anglais, *Ital.* Corno Inglese, *Ger.* Englisches Horn.) The mechanical construction, compass and fingering of this instrument are the same as the Oboe, but a fifth lower in pitch. It may be called a Tenor Oboe in F; consequently its part must be written a fifth above the real sounds. It has a wailing, melancholy quality of tone; deeper and more veiled than the Oboe, and not so well adapted to lively strains. The lower notes are good, but it is best not to write for it above:—



which sounds the F below. Nearly all the modern composers write for the instrument. For prominent examples of its use, see the introduction to Rossini's Overture to "William Tell," Meyerbeer's celebrated Cavatina "Robert, toi que j'aime," from "Robert le Diable," where it is used in connection with the Harp, and Wagner's "Lohengrin" and other operas, where he combines it in a variety of ways with other instruments. One of the finest examples of an effective use of the instrument occurs in Halevy's opera, "The Jewess." We take the liberty of copying it from Berlioz's work.

162.

*Andantino espressivo.*

CORNI  
INGLESI

HORNS IN F

BASSOON

VIOLINS

VIOLA

CELLO E  
BASSO

The musical score is for the English Horn section of Berlioz's 'The Jewess'. It consists of six staves, each for a different instrument: Corni Inglese, Horns in F, Bassoon, Violins, Viola, and Cello & Bass. The key signature is three flats (B-flat, E-flat, A-flat) and the time signature is common time (C). The tempo/mood is 'Andantino espressivo'. The score begins with a series of eighth and sixteenth notes, often beamed together in groups of three. The Horns in F part starts with a rest followed by a soft (p) dynamic. The Bassoon part starts with a rest followed by a very soft (pp) dynamic. The Violins, Viola, and Cello & Bass parts all start with a pizzicato (pizz) dynamic. The score is written for a full orchestra, with the English Horns playing a prominent role in the melody.



First system of musical notation, featuring six staves. The top two staves (treble clef) contain complex melodic lines with many beamed sixteenth and thirty-second notes. The third staff (treble clef) is mostly empty, with a *pp* marking appearing on the fourth staff (bass clef). The bottom three staves (treble and bass clefs) contain rhythmic accompaniment with eighth and sixteenth notes.



Second system of musical notation, featuring six staves. The top two staves continue the complex melodic lines. The third staff (treble clef) has a *ppp* marking. The fourth staff (bass clef) has the instruction **TIMPANI IN F.** written above it. The bottom three staves continue the rhythmic accompaniment.



## CHAPTER XXXIII.

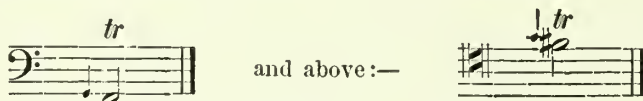
THE BASSOON (*Ital.* Fagotto, *Ger.* Fagott, *Fr.* Basson). The Bassoon is the Bass of the Oboe, and like it, is played by means of a double-reed. The music for it is written in both the Bass and Tenor clefs, and it has the following compass with all the chromatic intervals:—



It is possible, however, to produce the chromatic scale up to the next F, but the notes above B $\flat$  are very hazardous and should rarely be used. Some instruments have a low A:—



but as they are not very generally in use, it is better not to write that note. All Shakes below:—



are either difficult or impossible, and also the following intermediate notes:—



The favorite keys are those with few sharps or flats. Sustained tones (Ex. 155) and passages of considerable rapidity, either staccato (Ex. 130, 136) or legato (Ex. 132) are suitable for the Bassoon. The Bassoon is one of the most useful instruments in the orchestra, and is capable of the most varied effects. It has been extensively employed by composers for about two centuries. In this country, the little demand for Bassoon players, and the great difficulty in learning the instrument, has deterred musicians from practicing it. It is employed only in the large orchestras and in a few of our military bands, but there is no doubt that as musical taste improves, and bands become more completely organized, the Bassoon will receive its full share of attention. The quality of tone varies in the different octaves. The high notes have a pinched quality, as though in distress, which Berlioz expresses as nearly as possible when he calls them "painful, suffering—even miserable." The following passage, which occurs during the overture several times in various keys, gives precisely this impression:—

## 163.

## OVERTURE: "LEONORE" No. 3. Beethoven.

Allo.

OBOE

BASSOONS

1

2

VIOLINS:

VIOLOLA

CELLO

## FLUTES col Oboi Sva

FLUTES col Oboi Sva

HOorns IN C.

*p* Basso

Dynamic markings: *cres.*, *f*, *cres.*, *f*, *cres.*, *cres.*, *f*, *sf*.

The next example from the same overture, illustrates a favorite device of Beethoven's, of writing passages without accompaniment for the Bassoon in the upper register, with the Flute and Oboe in octaves above. He has carried out the same idea in the Schérzo of the Eroica Symphony—Ex. 165.

## 164.

## OVERTURE: LEONORE, No. 3, Beethoven.

FLUTES col Oboe Sva.

*Allo.*

OBOE

BASSOONS

1

2

VIOLINS:

VIOLA

CELLO & BASSO

Dynamic markings: *fp*, *sf*, *p*, *pizz.*, *arco*.

Musical score for six staves, likely strings. The notation includes various dynamics: *sf* (sforzando), *p* (piano), and *dim* (diminuendo). The staves are arranged in three pairs, with the top pair having a wavy line above them. The bottom pair has a wavy line below them.

### 165. Eroica Symphony (Scherzo). Beethoven.

Musical score for the Scherzo of Beethoven's Eroica Symphony. The score is for the following instruments: FLUTE, OBOE, BASSOON, 1st Violin, 2nd Violin, Viola, and Cello & Bass. The tempo is marked *Presto. 8va*. The key signature is one flat (B-flat), and the time signature is 3/4. The dynamics are marked *p* (piano) and *dol* (dolce).

The low notes of the Bassoon afford excellent basses to the wood instruments, and also blend well with Horns; see Example 172. Passages in unison, or octaves, with the Cello, or other stringed instruments, are often to be met with; see Examples 130 and 132. The middle notes are somewhat weak, but admirable for dramatic effects, where something of the supernatural is wanted. The following, for two Bassoons alone, occurs in the incantation scene, or "Resurrection of the Nuns," in Meyerbeer's "Robert le Diable." Taken in connection with the scene, the croaking of these two instruments is unearthly in the extreme, and invariably causes a shudder:—

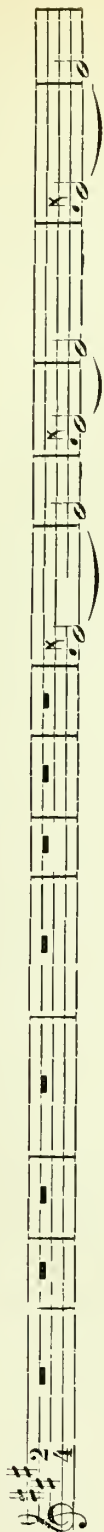
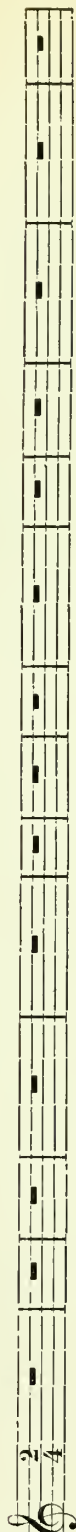
Musical score for two Bassoons, marked *Andante*. The score is in 3/4 time, with a key signature of one flat (B-flat). The dynamics are marked *p* (piano). The notation includes triplets and accents.

The Bassoon, above all other instruments, is capable of comic effects, and when writing for it, this fact should be borne in mind, for it easily passes from the sublime to the ridiculous. Nothing more appropriate to the situation was ever written than the following from Mendelssohn's music to the "Midsummer Night's Dream," which is played for the entry of the clowns:—

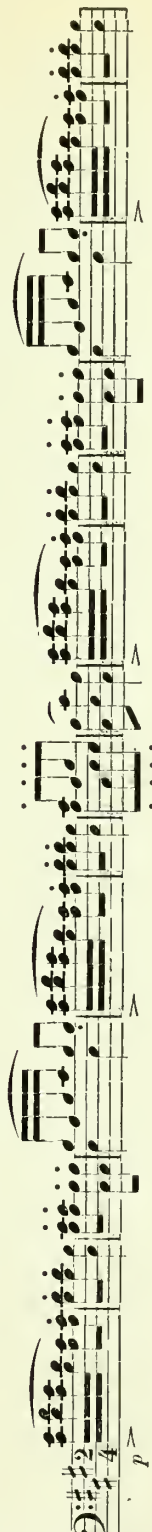


*Allargo. Molto con moto.***167.**  
FLUTES

## OBOE

CLARIONETS  
IN A

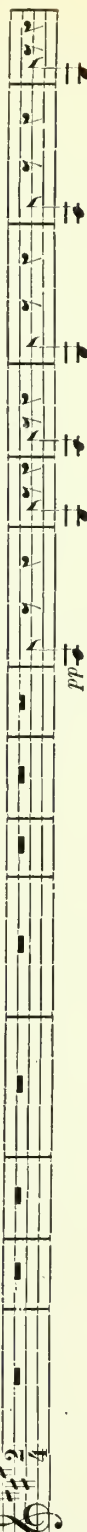
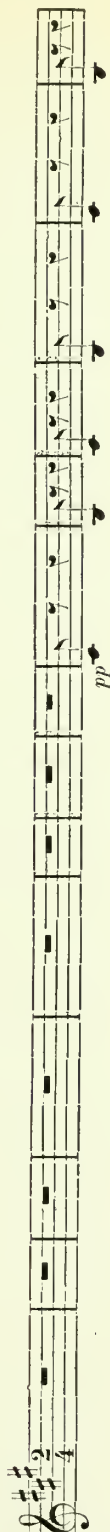
## FAGOTTI



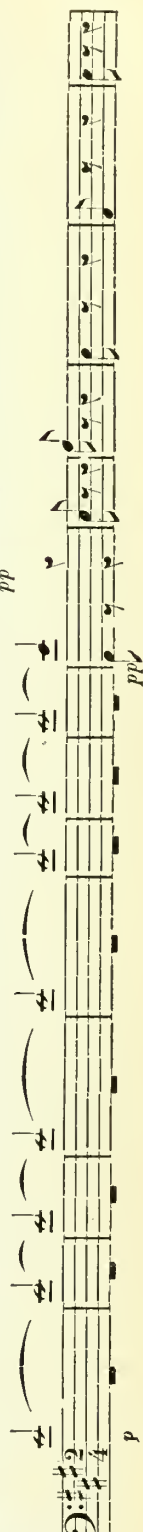
## CORNI IN A



## VIOLINS:



## VIOLA

CELLO  
AND BASSO

This page of musical notation represents a complex piano score. It features multiple staves, each containing intricate rhythmic patterns and dynamic markings. The notation includes various note values, rests, and slurs, indicating a highly technical and expressive piece. Key elements include:

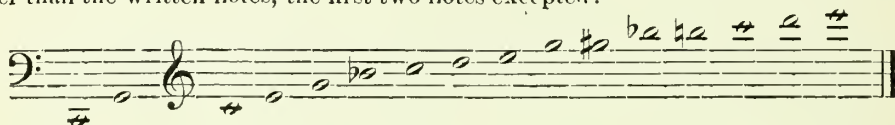
- Dynamic Markings:** *sf* (sforzando), *mf* (mezzo-forte), and *p* (piano) are used to indicate changes in volume and intensity.
- Articulation:** Accents and slurs are used to shape the phrasing and attack of the notes.
- Rhythmic Complexity:** The notation includes a variety of note values and rests, creating a dense and rhythmic texture.
- Staff Organization:** The staves are arranged in a vertical column, with each staff representing a different voice or instrument.

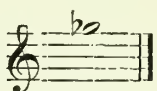
This musical score page, numbered 129, is titled "INSTRUMENTATION—THE ORCHESTRA." It features a complex arrangement of musical staves, likely representing different sections of an orchestra. The notation includes various dynamics such as *ff* (fortissimo), *sf* (sforzando), *p* (piano), and *cres* (crescendo). The score is written in a key with two sharps (F# and C#) and a 2/4 time signature. The notation includes a variety of note values, rests, and articulations, with some staves showing dense, rapid passages and others featuring more sustained, melodic lines. The overall structure suggests a full orchestral work, with the page showing a significant portion of the instrumentation.

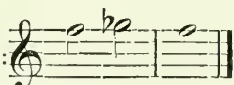




## CHAPTER XXXIV.

**THE HORN** (*Ital. Corno, Fr. Cor, Ger. Horn.*) This instrument, before valves or pistons were so generally attached to it, had a number of movable crooks, of various sizes, which rendered the pitch higher or lower, as occasion required. Thus, if the music was in C, the C crook was used and the part for the Horn was written in C. When the music was in A, the A crook was applied and the part written in C—a minor third higher than the real sounds. By means of these different crooks, in connection with the tuning-slide, the Horn could be put in any desired key, and the part always written in C; thus obtaining the advantage of the “open” notes—those which can be produced without the aid of pistons or valves. The natural Horn in C (low) gives the following “open” sounds, the effect of which is an octave lower than the written notes, the first two notes excepted:—



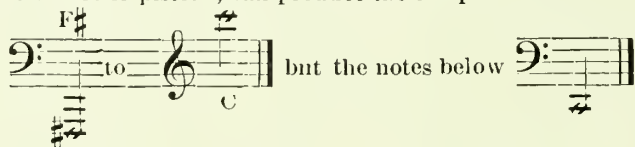
Berlioz gives, also, as an open note,  which is a little too low, and only good when in-

troduced between two Fs:  It should never be used as an F#.

Low A♭  can be obtained by forcing the G below and contracting the lips, and the low F  by relaxing them.

As the *natural* Horn (without valves) is now very rarely used—in this country at least—we will not occupy much space in discussing it, but refer those who wish to study it to Berlioz's work, where the subject is very fully treated. Crooks may be used with the valve Horn to put it in convenient keys. The best are E♭, E♭, F, G and A♭. The application of valves to the Horn diminishes, somewhat, its clearness and purity of tone, but this loss is compensated for by the greater perfection and evenness of its scale, and by doing away with the constant change of crooks, necessary on the natural Horn, with every change of key. Most Horn players use the F Horn, and transpose their parts when they are written for Horns in other keys. There is little use for composers to write for Horns in any other key than F, for players *will not* take the trouble to change the crooks if they can possibly avoid it. There is no doubt much advantage to the performer in using the F Horn exclusively, for greater certainty in producing the tone, and more perfect intonation is insured by playing an instrument always in the same key; and this applies with great force to the Horn, the most treacherous of instruments. Many composers of the present day, especially of dance-music, write for F Horns only. Those who aspire to the classical style, still adhere to the “old way.”

The Horn with three valves or pistons, can produce the complete chromatic scale from

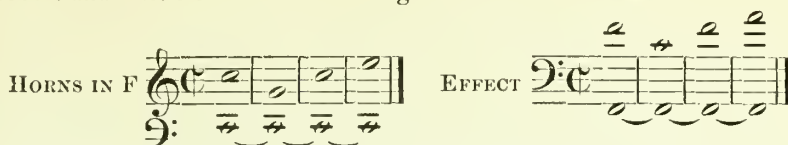


are difficult to strike with certainty, or to hold steadily in tune. The three or four highest notes are also difficult unless properly led up to, as in the following from Beethoven's *Eroica* Symphony:—

**168.** *Presto.*

HORNS IN E♭

It is usual to write Horn parts in the Treble clef, but for certain low notes the Bass clef is used. Sometimes the Treble and Bass clef will be found together on the same staff:—



From which it will be seen that music in the Treble clef *sounds lower* than it is written, while in the Bass clef it *sounds higher*. Horns in low C, B, B $\flat$  and A, are exceptions as to the Bass clef.

The following (second Horn solo) from Beethoven's *Fidelio* Overture in E will illustrate the custom of writing the Bass notes an octave lower than would seem to be proper.

HORN IN E

169.

*p* *dot*

EFFECT

The last two measures are played as if written

The table below will be found useful for reference. It gives the *open* sounds of Horns in different keys and the effects they produce.—

HORNS IN B $\flat$  (low)

170.

EFFECT

Compass of the 2nd Horn.

Compass of the 1st Horn.

Rare.

HORNS IN C (low)

EFFECT

Compass of the 2nd Horn.

Compass of the 1st Horn.

Rare.

HORNS IN D

EFFECT

2nd Horn.

1st Horn.

Rare.

HORNS IN E $\flat$

EFFECT

2nd Horn.

1st Horn.

Rare.

**HORNS IN E**

2nd Horn. *Rare.*

1st Horn.

**EFFECT**

**HORNS IN F**

2nd Horn. *Very rare.*

1st Horn.

**EFFECT**

**HORNS IN G**

2nd Horn.

1st Horn.

**EFFECT**

**HORNS IN A $\flat$**

2nd Horn.

1st Horn.

**EFFECT**

**HORNS IN A $\sharp$**

2nd Horn. *Rare.*

1st Horn.

**EFFECT**

**HORNS IN B $\flat$**   
(Alto)

2nd Horn. *Very rare.*

1st Horn.

**EFFECT**



2nd Horn.

HORNS IN C (High)

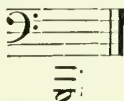
1st Horn.

EFFECT

The *high* Horn in C is very seldom written for. It must be remembered when writing for Horns that those in the high keys, say in A, or A $\flat$ , cannot play the high notes as easily as those in low keys like C or D, and the low Horns cannot reach the low notes as well as the high Horns. Thus, the upper G



written for the Horn in C (low) would not be difficult, but the same note for the Horn in A might possibly prove a failure. On the contrary, the Horn in A can produce the double G below,



but on the C Horn it would be impracticable.

To illustrate:—

HORN IN A

EFFECT

HORN IN C (low)

EFFECT

The above shows, that upper G on an A Horn produces a sound a major sixth higher than the same note played on the C Horn, hence the difficulty of producing it. On the other hand, the low G of the Horn in A produces only E, while the same note on the C Horn sounds (or would sound if it could be played) double G. Enough has been said to warn the student against the danger of writing too high for high Horns, or too low for low Horns. In cases of doubt, reference should be made to the table (Ex. 170), where the exact sounds made by Horns in any key can be seen at a glance.

The tone of the Horn is exceedingly rich and mellow. Its upper notes have great carrying power, and can be heard at a considerable distance. Its low tones make fine, sonorous Bases for *piano* passages of reed instruments, and by forcible blowing a *brassy* quality is obtained, which is very effective in *forte* passages. *Closed* tones, made by closing the bell more or less with the hand, are of a very different quality from the *open* sounds. On the natural Horn the tones lying *between* the open sounds are necessarily closed—the hand having to close the bell in order to lower the tone. As the bell is the more completely closed, the sound becomes lower, and also rougher and more difficult to produce and to play in tune. These closed tones are valuable for certain effects where a rough, dull sound is desired. On the Horn with valves every note in the scale can be made a *closed* note. Composers sometimes indicate them by writing + over the notes to be closed. The Horn has the valuable quality of blending well with all other instruments, and also with the voice. It can be used with capital effect as a solo instrument in melodies of a melancholy, dreamy character, and is especially useful for sustaining soft low harmonies. Weber has done wonders with the Horn. The introduction of the Overture to “Der Freischütz” contains one of the finest specimens of Horn music; see Example 171. Mendelssohn has also written charmingly for the Horn. We give, as an example of the proper treatment of the Horn as a solo instrument, the opening of the Nocturne from the music to the “Midsummer Night’s Dream;” see Example 172. It is customary, when writing for four Horns, to have them in different keys—usually two in the key of the tonic and two in the dominant; see Example 161. This arrangement, however, is not always the most advantageous. Sometimes two are keyed in tonic and two in the relative minor, as in the Overture to “Der Freischütz;” see Example 141.

As it is not necessary to make the same calculations for obtaining open notes on the valve as on the natural Horn, there is less need of putting them in different keys. The chances are that the F Horn will be used by the performer, no matter what key they may be written in.

## 171.

## OVERTURE: DER FREISCHÜTZ.

WEBER.

*Adagio.* *Soli.*

CORNI IN F

CORNI IN C

VIOLINO I

VIOLINO II

VIOLA

CELLO

BASSO

*pp* *mfz* *mf* *pp* *pp* *pp*

172.

## Notturmo from the Music to the Midsummer Night's Dream.

MENDELSSOHN.

*Andante tranquillo.*

CLARINETTI IN A. *p*

FAGOTTI *p*

CORNI IN E *p dol*

BASSI *pp*

It will be seen in the above example, that the solo is accompanied, principally, by the low wind-instruments, the Double-bass and Cello being used for the low foundation notes only. But, on its recurrence (No. 173) the accompaniment is more fully scored, the Violins and Violas playing in triplets while the Flutes and 1st Clarionet play in even time. This being an excellent example of the extent to which an instrumental accompaniment can be developed from very simple fundamental harmonies, it will be profitable to give considerable space to its illustration; for only by close examination and careful study of such examples can the student learn the secret of handling his instrumental forces skillfully. While the fundamental harmonies remain the same as in the first instance (No. 172), the instrumental coloring has been heightened by introducing accompanying figures of different designs; at the same time, the sustained tones of the Oboe, 2nd Clarionet and 2nd Horn add greater fullness. We may have occasion to refer to this example again.



## 173.

FLAUTI

OBOI

CLARINETTI  
IN A

FAGOTTI

CORNI IN E

1st VIOLIN

2nd VIOLIN

VIOLA

BASSI

The musical score is written for an orchestra. It begins with a rehearsal mark of 173. The key signature is three sharps (F#, C#, G#) and the time signature is 3/4. The staves are arranged as follows:
 

- FLAUTI:** Two staves, each with a treble clef and a 3/4 time signature. The music consists of a series of eighth and sixteenth notes, often beamed together.
- OBOI:** One staff with a treble clef and a 3/4 time signature. It features a long, sustained note followed by a melodic line.
- CLARINETTI IN A:** Two staves, each with a treble clef and a 3/4 time signature. The music includes eighth and sixteenth notes, with some triplets indicated by a '3' over the notes.
- FAGOTTI:** One staff with a bass clef and a 3/4 time signature. It starts with a dynamic marking of *p* (piano) and includes a *dol* (dolce) marking.
- CORNI IN E:** Two staves, each with a treble clef and a 3/4 time signature. The music is characterized by long, sustained notes.
- 1st VIOLIN:** One staff with a treble clef and a 3/4 time signature. It begins with a dynamic marking of *pp* (pianissimo).
- 2nd VIOLIN:** One staff with a treble clef and a 3/4 time signature. It also begins with a dynamic marking of *pp*.
- VIOLA:** One staff with a treble clef and a 3/4 time signature. It begins with a dynamic marking of *pp*.
- BASSI:** One staff with a bass clef and a 3/4 time signature. It begins with a dynamic marking of *pp*.

This page of musical notation, numbered 137, is titled "INSTRUMENTATION—THE ORCHESTRA." It contains ten staves of music, each representing a different instrument or section of the orchestra. The notation is written in a standard musical format, including notes, rests, and dynamic markings. The first staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The second staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The third staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The fourth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The fifth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The sixth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The seventh staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The eighth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The ninth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The tenth staff (top) features a treble clef and a key signature of three sharps (F#, C#, G#). The notation includes various musical symbols such as notes, rests, and dynamic markings like *pp* (pianissimo). The page is a high-quality reproduction of a musical score, likely from a 19th-century publication.

This page of musical notation, numbered 138, is titled "INSTRUMENTATION—THE ORCHESTRA." It contains ten staves of music, likely representing different sections of an orchestra. The notation is written in a key signature of one sharp (F#) and a 4/4 time signature. The music features various dynamic markings and articulation marks.

The staves are arranged in two groups of five. The first group of five staves (top) includes markings such as *cres* (crescendo), *dim* (diminuendo), *sf* (sforzando), and *dol* (dolce). The second group of five staves (bottom) also includes *cres*, *dim*, and *pp* (pianissimo) markings. The notation includes various note values, rests, and slurs, indicating a complex orchestral texture.



This page contains ten staves of musical notation, likely for a string or woodwind section. The notation includes various dynamics and articulations:

- Staff 1:** *cres*, *f*, *sf*, *dim*, *pp*
- Staff 2:** *cres*, *f*, *sf*, *dim*
- Staff 3:** *cres*, *f*, *sf*, *dim*, *pp*
- Staff 4:** *cres*, *f*, *sf*, *p*, *pp*, *dol*
- Staff 5:** *cres*, *al*, *f*, *dim*, *pp*
- Staff 6:** *cres*, *al*, *f*, *dim*, *pp*
- Staff 7:** *cres*, *f*, *dim*, *pp*
- Staff 8:** *cres*, *f*, *dim*, *pp*
- Staff 9:** *cres*, *f*, *dim*, *pp*, *pizz*

The notation includes various musical symbols such as notes, rests, slurs, and dynamic markings.

This page of musical notation is for an orchestra, featuring multiple staves with various instruments and dynamic markings. The notation includes treble and bass clefs, key signatures of three sharps (F#, C#, G#), and time signatures of 4/4 and 3/4. The music is characterized by complex rhythmic patterns, including sixteenth and thirty-second notes, and frequent use of slurs and ties. Dynamic markings such as *cres* (crescendo), *f* (forte), *dim* (diminuendo), and *p* (piano) are used throughout. The notation is arranged in a multi-measure format, with some staves showing multiple measures of music. The overall style is that of a classical orchestral score.

The page contains the following musical elements:

- Staves:** Multiple staves are shown, each representing a different instrument or section of the orchestra.
- Dynamic Markings:** *cres*, *f*, *dim*, and *p* are used to indicate changes in volume and intensity.
- Articulation:** Slurs, ties, and accents are used to shape the musical phrases.
- Key Signature:** Three sharps (F#, C#, G#).
- Time Signature:** 4/4 and 3/4.

[illegible]

Here the bower opens, disclosing Titania and Bottom with the elves.

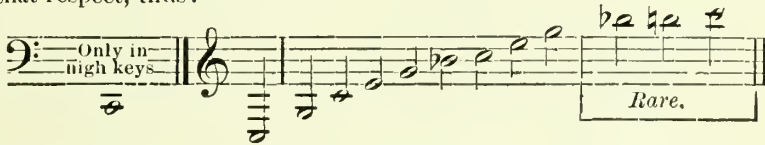



This musical score page, numbered 142, is for an orchestral work. It features a variety of instruments and vocal parts. The woodwinds, including flutes, oboes, and bassoons, are active in the upper staves, often playing melodic lines with dynamic markings like *pp* (pianissimo) and *ppp* (pianissimissimo). The strings, including violins, violas, cellos, and double basses, provide harmonic support and rhythmic patterns, with some parts marked *arco* (arco) and *pizz* (pizzicato). The brass section, including trumpets and trombones, is also present, with some parts marked *pp*. The vocal parts, including Soprano (Sra. alta), Alto (Sra. alta), and Tenor (Tr.), are interspersed throughout the score, often playing melodic lines. The score is written in a standard musical notation with a key signature of one sharp (F#) and a common time signature (C). The page is numbered 142 in the top left corner, and the title "INSTRUMENTATION—THE ORCHESTRA." is centered at the top. The page number "7" is in the top right corner.

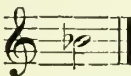
## CHAPTER XXXV.

THE TRUMPET (*Ital.* Tromba; *Ger.* Trompete; *Fr.* Trompette). In Italian music sometimes called Clariuo. This instrument is very seldom used in this country, the Cornet having taken its place. This is much to be regretted, for the Trumpet has a fine, brilliant quality of tone which the Cornet cannot supply, but the latter is preferred because it is much easier to play, and better adapted to the general wants of the musician. There are four varieties of the Trumpet; the plain or natural, the slide, the keyed, and those with pistons or cylinders.

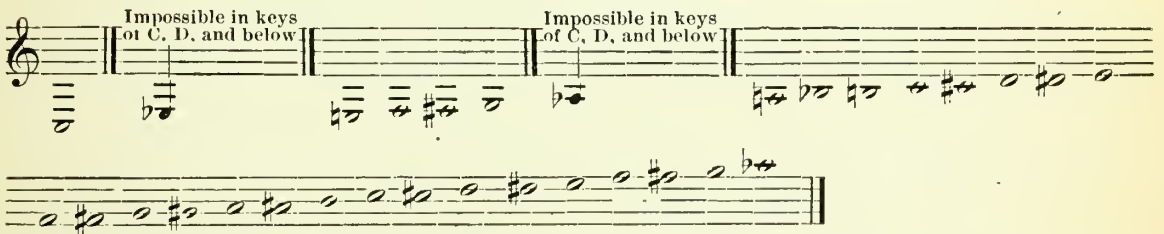
The plain Trumpet produces only the open or natural sounds of its tube, being the same as the natural Horn in that respect, thus:—



The low C  on Trumpets lower than F is not of good quality.

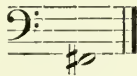
The B $\flat$   is too flat, and can only be played in tune by forcible blowing; consequently it cannot be used *pianissimo*.

The slide Trumpet gives many notes in addition to the above:—

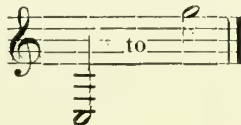


Keyed Trumpets are not often seen in this country. They are much inferior to the valve Trumpet, and we need not waste space in treating of them.

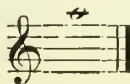
The Trumpets with cylinder or pistons are now very generally used in Europe. Strauss, and many other popular composers, writes almost entirely for the valved Trumpet in F. The complete chromatic scale can be executed on the valved Trumpet. Berlioz says, "the high Trumpets, in F or G, can descend chromatically as far as F $\sharp$ "



but the extreme notes are of poor quality." From low C to upper G is quite sufficient for all practical purposes:—

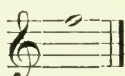
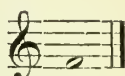


On Trumpets in high keys, even E will be found high enough for comfort to the performer. As E on the F Trumpet sounds A:—

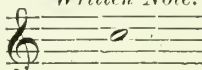
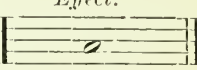
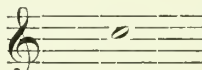
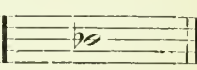
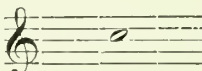
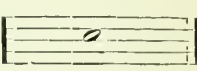
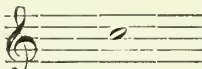
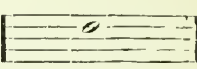
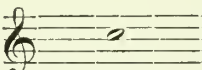
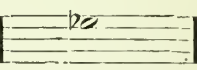
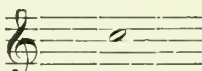
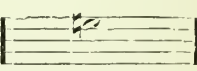
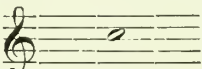
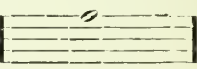


Cornet players will appreciate the difficulty when called upon to *produce the same sound*, by playing upper B $\flat$  on the B $\flat$  Cornet. It should be remembered that Trumpets are an octave higher than Horns (when both are in the same key), and that C:—



on the F Trumpet, for instance, sounds F,  while on the F Horn it gives 

The following table gives the real sounds of Trumpets in various keys:—

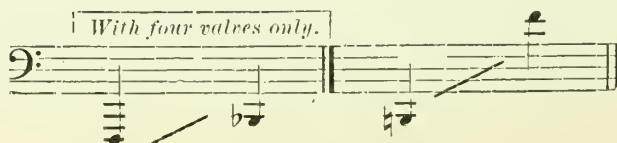
	Written Note.	Effect.
Trumpet in A sounds a minor third lower than written.		
Trumpet in B $\flat$ sounds a major second lower than written.		
Trumpet in C sounds as written.		
Trumpet in D sounds a major second higher than written.		
Trumpet in E $\flat$ sounds a minor third higher than written.		
Trumpet in E $\sharp$ sounds a major third higher than written.		
Trumpet in F sounds a perfect fourth higher than written.		

For prominent Trumpet parts the student is referred to "The Trumpet shall Sound," from Handel's "Messiah;" the "Wedding March," by Mendelssohn; the March and Chorus from "Tannhauser;" Beethoven's Overture "Leonora" No. 3; Anber's Overture "Fra Diavolo" and Meyerbeer's "Fackeltanz" No. 3.

## CHAPTER XXXVI.

**THE BASS-TUBA.** The Tuba is the lowest in pitch of the brass instruments. In the hands of a good performer it has great power and compass. It is also possible to play the softest passages, and when combined with Double-basses, it is often difficult to distinguish its tones, so completely do they blend with the strings; see Ex. 175. In this respect it is much superior to the Ophicleide, which it has entirely superseded, both in the Orchestra and Military Band. When used in the Orchestra the Tuba is a non-transposing instrument. The favorite Tuba for Orchestral playing is the one in F, having four valves. In amateur Brass Bands, the E $\flat$  Tuba is used almost exclusively.

The F Tuba has the following compass, with all the chromatic intervals:—





The  $E\flat$  Tuba has this compass:—



In orchestral writing the Tuba not only sustains the Bass part in the brass section, but often plays in unison or in octaves with the Double-basses. When thus combined with the strings, the effect is to make very low Bass tones come out more distinctly. The following example is a good illustration of this manner of writing:—

Eine Faust Overture. Wagner.

175.

*Molto sostenuto.*

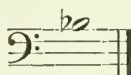
BASS-TUBA.

TIMPANI IN D, A.

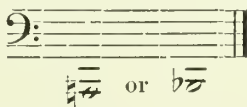
CONTRABASSI.



All the text-books on instrumentation warn the student against writing rapid passages for the Tuba. It is a good rule to observe when writing for *any* low Bass instrument. Nevertheless, I know Tuba players who can execute with ease, passages which many Clarinet players find exceedingly troublesome; and they can also bring out clearly, passages which are a mere jumble on the Double-bass. Of course, these passages must be within a reasonable compass and in favorable keys. A rapid passage executed on the E♭ Tuba, for instance, would be much easier in the key of E♭ than in E♭. The former is the *natural key* of the instrument, while the latter is quite foreign to it. Ex. 147 furnishes a fine example for the Tuba, but it would be very hazardous to carry parts so high for any but professional players. For amateur performers it would be better not to write above



and as all Tubas do not have the fourth valve, the lower limit should be about A or B $\flat$ :



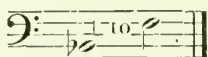
Besides the Tuba in E $\flat$  and F, there are Contra-bass Tubas in B $\flat$  and C. The one in C stands a fourth below the F instrument. With *three valves*, the lowest tone would be F $\sharp$ :—



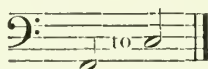
With the *fourth valve* it can descend six semitones lower, but these extreme low notes are very difficult of production. The **B♭** Contra-bass Tuba is a tone lower than the C, a fifth lower than the F, and a fourth lower than the **E♭** Tuba, but these differences in pitch need not be taken into consideration, as the written note is the same for all. In certain Military Bands of Europe, all Tubas, except the one in C, are treated as transposing instruments. An explanation of the manner of writing for them will be given in Part III. There is no need here of quoting examples for the Tuba. The student will find a sufficient number in different parts of this work, to give him an idea of the proper way of writing for it.

## CHAPTER XXXVII.

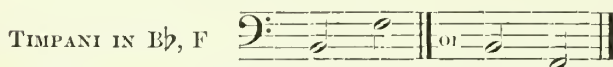
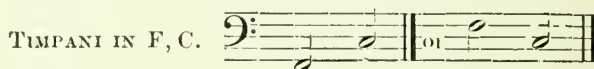
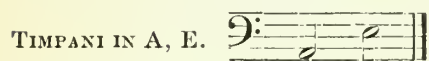
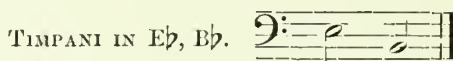
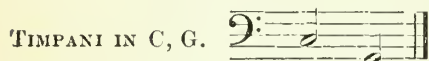
THE KETTLE DRUMS (*Ital.* Timpani; *Ger.* Panken; *Fr.* Timbales) are so called from the kettle-shaped shell of brass or copper over the top of which the head is stretched. By regulating the tension of the head (which is effected by various methods) higher or lower tones of *definite pitch* are obtained. Two of these Drums are usually employed. The smaller one may be tuned to any note of the scale, from B $\flat$  to F:—



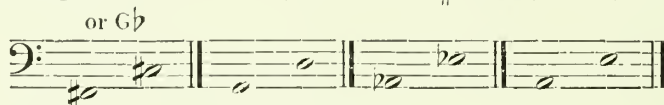
and the larger, from F to C:—



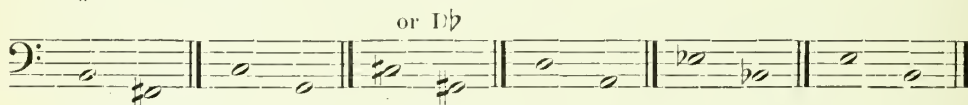
The Bass clef only is used for the Kettle Drums, and the sounds are the same as the written note. The most common practice is to tune one to the Tonic and the other to the Dominant, thus:—



It will be seen from the above, that for the keys of F and B $\flat$ , we have a choice between tuning by *fourths*, or by *fifths*, which is not possible in other keys; thus, in F $\sharp$ , G, A $\flat$ , and A, we must tune by fifths:—



while B $\sharp$ , C, C $\sharp$ , D, E $\flat$  and E, we must tune by fourths:—

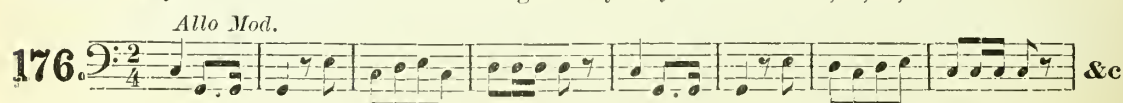


Although the above is the most usual way of tuning Drums, there is no reason why the composer should not adopt any method which his fancy might dictate, always, however, keeping within the compass of the Drums as given above; see Ex. 140, where the Drums are tuned to C, A—the A being required to sound *pp*, with the *pizzicato* of the Double-bass. Beethoven, in the Scherzo of his Ninth Symphony, has written for the Drums in octaves:—



Many authors now-a-days write for more than two Drums; thus, three—G, D, A—are required for the proper performance of Auber's overture to "Masaniello."

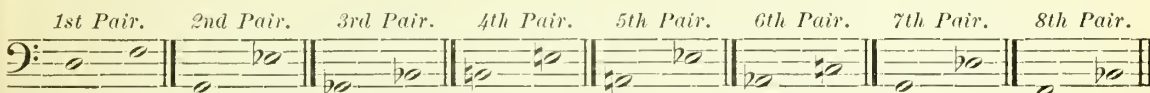
Spoehr uses three Drums—G, D, E $\flat$ —in his "Historical Symphony." In the opera of "Robert le Diable," Meyerbeer has written the following melody for *four* Drums—C, G, D, E:—



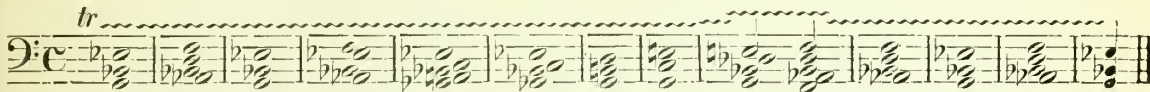
Our opera orchestras do not contain *four* Drums, so the whole passage is played on the Double-bass, *pizzicato*!

Berlioz, who has surpassed all others in the use of Drums, in his "Fantastic Symphony" accompanies a solo for English Horn with *four* Drums tuned to B $\flat$ , F, and A $\flat$ , C.

The same composer in his "Requiem," besides sixty-eight wind instruments, has written for *eight* pairs of Drums, tuned as follows:—

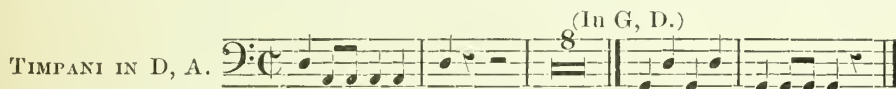


The following succession of chords is played on these Drums as an accompaniment to the voice:—



I am not aware that even Richard Wagner has ever attempted anything quite so extravagant.

Changes may be made in the tuning of Drums during the performance of a piece, if sufficient time is given to allow of it. Thus, if we begin in D and modulate to G, we may write something in this fashion:—



In this case only one Drum has to be changed—the A lowered to G—the D remaining the same.

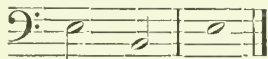
Should we modulate to A instead of G, the upper Drum would be raised to E—the A remaining for the new Tonie. See Ex. 177, where the B Drum is changed to C $\sharp$  and back again.

A roll on the Kettle Drum is made by alternate *single* strokes, while on the Snare Drum *two* strokes are given with each stick. It is written:—

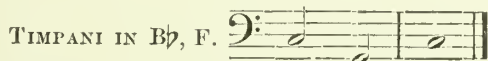


See Ex. 175, where the roll is of fine effect.

Accidentals are seldom written for the Kettle Drums, as the directions for tuning at the beginning of a piece sufficiently indicate the notes to be played; thus, for "Timpani in E $\flat$ , B $\flat$ ," the drummer will tune his Drum to those notes, and we need only write:—



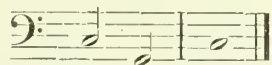
Sometimes, however, it may be well to write the exact note required; see Ex. 177. In many old scores the Drums are treated as transposing instruments, and the notes always written on C and G; thus:—



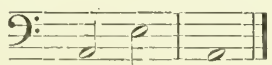
The Drums having been tuned to B $\flat$  and F, the *real* sounds would be:—



Supposing the Drums to be tuned to A, E, and the music to be written:—



The drummer would be obliged to play fifths instead of fourths:—



as the compass of the Drums do not admit of an upper A, nor a low E. This absurd custom of writing is no longer in vogue. The student is recommended to study the scores of Beethoven, which furnish many beautiful examples of the treatment of Kettle Drums.



## CHAPTER XXXVIII.

THE BASS DRUM (*Fr.* Grosse Caisse; *Ital.* Gran Cassa, or Gran Tamburo; *Ger.* Grosse Trommel) has now become a part of the modern Grand Orchestra, but its employment will not be in good taste, except on rare occasions, when some special effect is to be obtained from it. It does not give a *definite musical tone* and is therefore classed with the percussion instruments, which produce *noise* only. Its treatment in the orchestra differs entirely from that in the military band, where march rhythms require to be strongly marked. It is impossible to give rules as to when and how the student shall write for the Bass Drum, but it may be said that *the less it is employed the better will be the result*. One stroke of the Drum and Cymbals, *delivered at the proper time*, will give an effect of some consequence, but a continuous thumping from first to last is an *intolerable nuisance*, an *ear splitting noise*, which only those entirely bereft of musical feeling would venture to call *music*. The Bass Drum has been introduced in an artistic manner by Gounod in his "Faust" ballet music; by Rossini in the Overture to "William Tell;" by Berlioz in his "Requiem," and especially by Wagner and Liszt in a great variety of original ways and combinations. Johann Strauss has made good use of the Drum in his "Egyptian" and "Persian" Marches. As the Drum is of eastern origin, it may be appropriately used in music of an oriental character.

The Bass Drum part is written in the Bass clef with the notes on C. The Cymbal part is usually written on the same staff. Sometimes, however, to save space, the Bass and Snare Drums are written on one staff; it being understood that the Cymbals are to be struck with the Bass Drum. If either are to play alone, it is customary to write over, or under, the part the words "*senza piatti*," without the Cymbals; or "*piatti soli*," Cymbals alone. In German scores, "*ohne becken*."

## CHAPTER XXXIX.

THE CYMBALS (*Fr.* Cimbales; *Ital.* Cinelli, or Piatti; *Ger.* Becken), like Drums, are liable to be used too much. By a moderate use of the instruments of percussion, we shall not only avoid coarseness and vulgarity in our instrumentation, but have something in reserve for the climax. Besides clashing the Cymbals together (which should be done by a glancing stroke to give the best tone, as well as to prevent cracking them), there are other ways of making them effective. By striking one of them with the Bass Drum stick, a sound is given similar to a gong, the quality varying according to the force of the blow. Sometimes the Snare drummer executes rolls or other beats on one of the Cymbals, which, if appropriately introduced, and not too long continued, will be effective. Wagner has employed the Cymbals in this way in some of his operas. A clash of the Cymbals with a shriek from the Piccolo, is often used for the climax in dramatic music.

The Cymbal part is usually written on the same staff with the Bass Drum part, but some authors write the part in the Treble clef, and give it a separate staff.

It is a common custom (and a very popular one with those who have to "pay the fiddler") to fasten one of the Cymbals to the Bass Drum, so that the performer holding the other in his left hand, and Drum stick in his right hand, can "beat" both instruments—and sometimes the composer—at the same time. By this economical arrangement the fine tone of the Cymbal is destroyed; for, when the Cymbal which is attached to the Drum is struck, it causes the Drum to vibrate also, and this affects the brilliant quality of the Cymbal's tone. A stroke of the Cymbals *alone*, that is, without the Bass Drum, cannot be well executed unless they are struck in a particular way, and then left free to vibrate; or, if a short note is required, to be "damped," by bringing them suddenly against the chest.

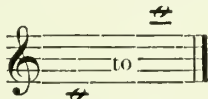
In Ex. 177, a *roll* is indicated for the Cymbals, which is made by shaking them rapidly together.

## CHAPTER XL.

*The Tambourine, Bells and Xylophone.*

THE TAMBOURINE is frequently used in the orchestra. It is hardly necessary to waste words on an instrument which is so familiar to every one, but for the sake of completeness it will be briefly noticed. Although it has long been disagreeably prominent in the "minstrel" bands, nevertheless, it may be used in the orchestra with good effect. It may be introduced with propriety in dances, or scenes of revelry, and in such melodies as are common to the people who use the instrument; as the Italian peasantry, and the gypsies. Gounod introduces it in his "Faust" ballet music, and Wagner has written for it in his Tannhauser, Lohengrin, and other operas; see Ex. 177. Music for the Tambourine may be written in either the Bass or Treble clef. Single strokes, or rolls may be written for it in the same manner as for the Snare Drum.

SETS OF BELLS (Glockenspiel) consist of graduated bars of steel. They are struck by metal hammers and give forth a sharp, ringing tone, which is easily heard above the din of the strongest *fortissimo*. They are usually made to give the chromatic scale of two octaves, from



Neither difficult chromatic, nor rapid passages, should be written for Bells. Plain melodies suit them best, and sometimes only a note here and there will prove most effective.

THE XYLOPHONE (*Ital.* Gigelira; *Ger.* Strohfiedel). This instrument is constructed on the same plan as the Set of Bells, but made of wooden blocks instead of metal bars. The blocks are laid across two parallel wisps of straw, and are struck by hammers similar to those used for Bells.

Some performers have acquired great facility of execution on the instrument, but it seems a pity that so much talent and perseverance should be wasted on such a worthless article.

The tone of the Xylophone is not very musical, at least to the writer, but many seem to enjoy its peculiarities. (I suppose the same may be said of the Jewsharp or Accordeon.) However, the instrument has its uses. Saint-Saens the talented French composer, has made apt use of it in his "Death's Dance" to represent the knocking together of the dry bones! When the cock crows the skeletons scamper off to their coffins; the graves close over them, and all is still. Would that the Xylophones were all buried with them!

The following extract from Wagner's "Tannhauser" is given, not only as an illustration of the admirable use made of the percussion instruments, but as an exceedingly brilliant piece of orchestration. The student will find it profitable to study the harmonic, as well as the instrumental effects. To appreciate this passage, it must be heard in the opera during the scene, "Venusburg."

177.

## OVERTURE: TANNHAÜSER.

RICHARD WAGNER.

*Molto vivace*

PICCOLO

FLUTES

OBOI

CLARIONETS IN A

VALVEHORNS IN E

WALDHORNS (Plain Horns) IN E

FAGOTTI

TRUMPETS IN E

TUBA

CYMBALS & TIMPANI IN E, B

TRIANGLE & TAMBOURINE

1st VIOLIN

2nd VIOLIN

VIOLA

CELLO AND CONTRABASSO

The musical score is written for a full orchestra. The key signature is D major (two sharps) and the time signature is common time (C). The tempo is marked 'Molto vivace'. The instruments are listed on the left, and their corresponding staves are on the right. The Piccolo, Flutes, Oboes, Clarionets, Valvehorns, and Waldhorns all play a melodic line with frequent trills and slurs. The Fagotti and Trumpets play a similar melodic line. The Tuba plays a sustained note. The Cymbals and Timpani play a rhythmic pattern. The Triangle and Tambourine play a rhythmic pattern. The Violins, Viola, and Cello/Contrabasso play a melodic line with frequent trills and slurs. The score includes dynamic markings like *ff*, *f*, and *tr*, and articulation like accents and slurs.



8va

*ff* *f*

*ff* *f* *ff*

*ff* *f* *ff*

*ff* *f*

*ff* *f*

*ff* *a 2* *f*

*ff* *a 2* *f*

*f*

*f* *tr* (1n  $\sharp$ ) *tr*

*tr* *tr* *tr* *tr* *f* *tr*

*8va* *ff* *ff*

*8va* *ff* *ff* *ff* *ff* *ff*

*ff* *ff* *ff* *ff* *ff*

*ff*

Overture: Tannhauser.



Musical score for Overture: Tannhauser. The score consists of 13 staves. The key signature is three sharps (F#, C#, G#). The time signature is 3/4. The score includes various musical notations such as notes, rests, and dynamic markings.

Dynamics and markings include:
 

- ff* (fortissimo) in measures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13.
- a 2* (second ending) in measures 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13.
- 8va* (octave) in measure 4.
- 1st* (first ending) in measure 1.
- f tr* (forte trill) in measure 8.
- f* (forte) in measure 10.

Overture: Tannhauser.





Musical score for *Overture: Tannhauser*. The score is written for a full orchestra, featuring multiple staves for strings, woodwinds, brass, and percussion. The key signature is D major (two sharps). The score includes dynamic markings such as *ff* (fortissimo) and *8va* (octave). Specific instrumentations are noted, including *3 Trombones*, *Tuba*, and *(Timp. in B)* (Timpani in B). The score concludes with a *ff unison* marking.

Overture: Tannhauser.

This musical score page contains 14 staves of music. The first 10 staves are arranged in five systems of two staves each. The first system (staves 1-2) features a treble clef and a key signature of three sharps (F#, C#, G#). The second system (staves 3-4) continues with the same clef and key signature. The third system (staves 5-6) introduces a bass clef and a key signature of one sharp (F#). The fourth system (staves 7-8) continues with the bass clef and one sharp. The fifth system (staves 9-10) features a treble clef and a key signature of one sharp. The remaining four staves (11-14) are arranged in two systems of two staves each. The sixth system (staves 11-12) features a treble clef and a key signature of one sharp. The seventh system (staves 13-14) features a bass clef and a key signature of one sharp. The score includes various musical notations such as notes, rests, and dynamic markings. The word 'tr' (trill) is written above the first staff of the sixth system. The word 'a2' (second ending) is written above the first staff of the seventh system. The score is written in a standard musical notation style with a clear and legible font.



This musical score page, numbered 157, is titled "INSTRUMENTATION—THE ORCHESTRA." and features the "Overture: Tannhauser." The score is written for a full orchestra, with staves for various instruments. The key signature is D major (two sharps) and the time signature is 3/4. The score is divided into two systems. The first system includes staves for woodwinds (flutes, oboes, clarinets, bassoons), strings (violins, violas, cellos, double basses), and a tuba. The second system includes staves for woodwinds (flutes, oboes, clarinets, bassoons), strings (violins, violas, cellos, double basses), and a tuba. The score is marked with "f" (forte) and "tr" (trill) throughout. The tuba part is specifically labeled "Tuba" and "f tr".

## CHAPTER XLI.

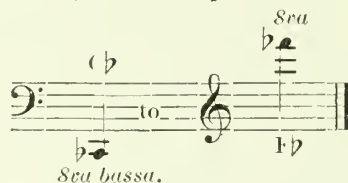
*Less Frequently Used and Obsolete Instruments.*

In the foregoing chapters we have treated all the instruments commonly used in the modern Orchestra. There are a few, however, to be met with occasionally, which the student—although he may never wish to write for them—should make himself acquainted with if he would read, understandingly, the scores which have parts for them. They are the HARP, the BASS CLARINET, the DOUBLE-BASSOON, the PIANOFORTE and the ORGAN.

There are also a number of instruments, practically unknown to the present generation of musicians, which are frequently written for in the scores of the older masters. These are the Viole d' Amour, the Mandoline, the Basson-quinte, the Bassot-horn, the Ophicleide and the Serpent. A short account of each of these instruments will be given in the order named above.

**THE HARP** (*Ital.* Arpa; *Fr.* Harpe; *Ger.* Harfe). To write successfully for the Harp requires considerable knowledge of its peculiar construction, a detailed account of which would occupy space that can be more profitably devoted to instruments which the student will be more likely to find in every-day use. But, for the information of those who may not be able to procure anything better, we will give a brief summary of the subject, taken from various sources. Many composers now write for the Harp as an Orchestral instrument, and, as I am informed, write much that is impossible of execution. This is probably due in some degree to the mistaken idea that the system of fingering is the same as that of the Pianoforte. There is no similarity whatever. The only Harp fit to be used in the Orchestra is the *double-action*, invented by Erard, of Paris. It can play in all keys, and strike all chords, but its nature being *diatonic*, it cannot play *chromatic successions*.

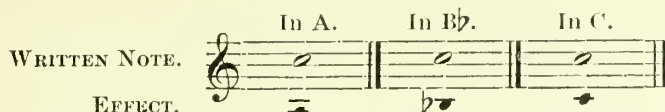
The double-action Harp is tuned in  $\text{C}\flat$ , and its compass is six octaves and a quarter:—



By means of the pedal the upper  $\text{F}\sharp$  can be extended to  $\text{F}\sharp$ , which may be called the *top note* of the instrument. The Harp is furnished with seven pedals with which the player can raise each string at pleasure, either a tone or semitone. By taking successively the seven pedals for the half-tone transposition, it can be set in  $\text{C}\flat$ ,  $\text{D}\flat$ ,  $\text{A}\flat$ ,  $\text{E}\flat$ ,  $\text{E}\flat$ ,  $\text{F}$  and  $\text{C}\sharp$ . By the next action of the pedals the Harp is set in  $\text{G}$ ,  $\text{D}$ ,  $\text{A}$ ,  $\text{E}$ ,  $\text{F}\sharp$  and  $\text{C}\sharp$ . Only one form of the minor scale can be set—that with the *augmented second* between the sixth and seventh degrees. For Orchestral pieces in  $\text{F}\sharp$ , the Harp part should be transposed to  $\text{C}\flat$ —its natural key. Chords of four notes may be taken with each hand, but should rarely exceed the octave.

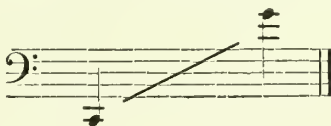
*Arpeggios* are very effective, and in quick movements should be limited to the octave. As a rule the hands should be separated by an octave, or at least a sixth, otherwise they interfere with each other. *Shakes* are only tolerable on the high notes. *Repeated notes* are possible by placing two strings in unison by means of the pedals. *Sudden changes of key are impossible*; time must be given to alter the pedals. The tones of the Harp combine well with other instruments, especially with the brass. Gomod has written much for the Harp. Liszt and Wagner employ it frequently. A familiar example may be found in the bridal chorus, in the third act of "Lohengrin." Meyerbeer has used it in his opera "Robert le Diable," in connection with the *English-horn*; see page 122.

THE BASS CLARINET is an octave below the ordinary Clarinet. Its part is usually written in the G clef. There are Bass Clarinets in A, B♭ and C; but the B♭ is the most frequently met with. The sound of the instrument in A, is a tenth below the written note; of the B♭, a ninth; of the C, an octave, thus:—



The compass of the Bass Clarinet is the same as the ordinary instrument, but the low notes are the most effective. Probably Liszt and Wagner, of all the composers of the present day, know best how to write for the instrument. The trio in the fifth act of "Les Huguenots" has a fine obligato for the Bass Clarinet.

THE DOUBLE-BASSOON (*Ital.* Contrafagotto; *Fr.* Contrebasson; *Ger.* Contrafagott, Doppelfagott). This instrument is an octave below the ordinary Bassoon in pitch, and consequently in unison with the Double-Bass. The notes are written an octave above the real sounds. The compass should not exceed:—



The extreme depth of the tones of this instrument render rapid passages in the lower register ineffective. The low tones are very difficult to produce *piano*, but in *forte* passages they are excellent. The proper function of the instrument is to give low Bases of a moderate degree of speed only. Examples of its use may be found in Beethoven's Fifth and Ninth Symphonies, Haydn's "Creation," and Mendelssohn's Overture "The Hebrides."

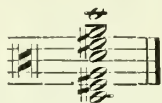
THE PIANOFORTE (*Ger.* Clavier). While the Piano cannot, strictly speaking, be called an Orchestral instrument, still, it is used now-a-days in many small Orchestras to supply the place of two or three other instruments, usually the 2nd Violin, Viola and Bass. This may be excusable when those instruments cannot be obtained, but when done as a money saving operation, it savors of meanness, and musicians should resolutely oppose it. Many theatres have Bands where the Piano does duty in this way. In consequence, the melo-dramatic music is butchered. Imagine the Piano *executing* a *tremolo* written for the string-quartette, to be played *ppp*, so that speaking may be heard through it! And when, in the dim light, the "heavy villain" creeps up, dagger in hand, to strike his victim, how provoking it is to have the effect of the *pizzicato* spoiled by the thumping of an old rattle-trap of a Piano! Much dance-music is now published in such a way that the Piano can carry through the whole thing in ease the first (and sometimes only) fiddle fails to come to the *scratch*. This manner of arranging, although in many cases it may be a necessity, is fatal to all ideas of instrumental coloring. From beginning to end the Piano stands out as the principal, instead of the accompanying instrument. The arrangement is, in fact, upside down. It will not be possible here to give any directions for arranging music for the Piano. When we take into consideration the immense quantity of music published for it, and the endless variety of styles, it will be seen at a glance that to treat the subject fairly would require volumes instead of a chapter. Only a Pianist can write well for the instrument. We can only advise the student to study carefully the works of the great performers, and as Berlioz remarks, "it will there be seen that the limits of possibility on this instrument are unknown." The Concertos of Mozart, Beethoven, Schumann, Mendelssohn and Liszt afford excellent examples, in different styles, of the treatment of the Piano as a solo instrument accompanied by the Orchestra. Scores are easily obtained, at small expense, and are valuable for the study of the Orchestral accompaniments, as well as for the solo parts.

THE ORGAN. The pipe or church Organ is rarely used with the Orchestra, except in grand choral compositions, such as Oratorios, Masses, Cantatas and the like. The Reed Organ, or Harmonium, is frequently used in operas, where church scenes are introduced, as in Gounod's "Faust." To write for the Organ requires, like the Piano, a practical knowledge of its resources, which cannot be had from books, but must be acquired by practice upon the instrument. All that was said on this point regarding the Piano applies with equal force to the Organ. Very little music is published for the Organ with Orchestra. Gounod's well-known "Meditation" (composed on the 1st Prelude of Bach's 48) is written for a Soprano solo, with Violin, Piano and Organ obligato. There are some arrangements from operas, published in France, for Violin, Piano and the Alexandre Organ, or Harmonium. Very effective arrangements from Orchestral scores may be made for Violin, Piano and Organ. The Organ should be given the reed and other wind instrument parts which usually have sustained tones to play; the Piano, meanwhile, playing the string instrument parts.

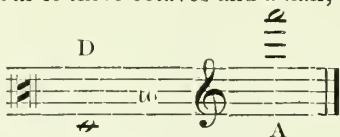


The following instruments may be said to have fallen into disuse, as no composers now write for them.

**THE VIOLE D' AMOUR.** According to Berlioz this instrument is "rather larger than the Viola, has seven strings, the three lowest of which are covered with wire. Below the neck and passing beneath the bridge, are seven more strings of *metal*, tuned in unison with the others, so as to vibrate *sympathetically* with them, thereby giving the instrument a second resonance, full of sweetness and mystery." It is written for in the Alto and Treble clefs and is tuned in thirds and fourths, thus:—

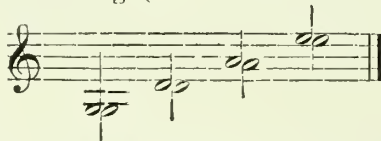


The compass of the Viole d' Amour is three octaves and a half, with the chromatic intervals:—



M. Jullien brought over, among other soloists, a performer on this instrument for his concerts in this country, given, I think, in 1853-54; and it is probable that no other public performance has ever been given here on the instrument. Berlioz mentions Mr. Urban as the only player in Paris. Meyerbeer has written an obligato for the Viole d' Amour in the first act of "Les Huguenots," but it is always played on the Viola in this country.

**THE MANDOLINE** has an almond-shaped body and a neck and finger-board with seventeen frets, similar to the Guitar. There are four *double* strings (some varieties have five) tuned in fifths like the Violin:—



The E strings are of gut, the A strings of steel, the D strings of copper and the G strings of gut covered with silver wire. The Mandoline has a compass of about three octaves:—

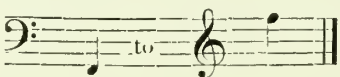


It is played with a quill, or plectrum, held in the right hand, the left being employed to stop the strings. The serenade in Mozart's "Don Giovanni" has an accompaniment for the Mandoline, which is usually played on the Violins, *pizzicato*, sometimes with not the greatest precision.

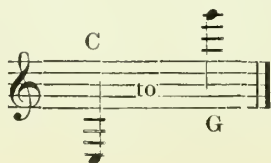
**THE BASSON-QUINTE** is a fifth higher in pitch than the common Bassoon; consequently it is a transposing instrument whose sounds are a fifth higher than the written notes. Its compass is about the same as the ordinary Bassoon, and written in two clefs:—



giving in real sounds, all the chromatic intervals:—



**THE BASSET-HORN** (*Ital.* Corno di Bassetto; *Fr.* Cor de Bassette; *Ger.* Bassethorn). A transposing instrument of the Clarionet family, standing in F (low). It differs from the Tenor (sometimes called Alto) Clarionet only in its bell, which lengthens the instrument, and by means of additional keys, extends the scale down to C—a third below the Clarionet. It has the following compass, with all the chromatic intervals:—



the real sounds being a fifth lower:—



It is unfortunate that this fine instrument should have gone out of use. Mozart seems to have had a partiality for it, having written prominently for it in several of his works. In his "Requiem" there are parts for two Basset-Horns instead of Clarionets.

**THE OPHICLEIDE.** About thirty years ago (1850) Ophicleides and Bugles were still to be found in many bands. While Cornets have taken the place of Bugles, valved Tenors and Basses have supplanted the Ophicleides. It is said that the only living performer in England is Mr. Samuel Hughes, who visited this country with M. Jullien. Of all the Buglers, "I know but one that unassailable holds on his rank." Bass Ophicleides are made in C and B $\flat$ . The compass of the C instrument, is three octaves and one note, with all the chromatic intervals.



The instrument in B $\flat$  has the same compass, but sounds one tone lower. The tones of the Ophicleide do not blend well with other instruments, particularly with the strings, and it lacks the rich, sonorous quality, and low compass of the Bass-Tuba. No other instrument, however, has the proper character of tone for such effects, for instance, as are produced by it in the Overture to the "Midsummer Night's Dream." The student will find by examining scores which have Ophicleide parts that it is used in much the same way as the Tuba is now-a-days—that is, to support the Bass of the brass department, and to re-enforce the string Basses in *forte* passages. In military band music it is sometimes treated as a transposing instrument, but in orchestral scores this is not the case, the performer having to play his instrument so as to produce the *real sounds*. In Mendelssohn's Oratorio "Elijah," may be found an Ophicleide part which several times descends to



and which is possible only on the B $\flat$  instrument.

**THE SERPENT.** How many of our young musicians have ever seen a Serpent? Not the sort of reptile, certainly, which tempted Mother Eve, for had such vile tones issued from *his* mouth as comes from these more modern vipers, she would have taken to her heels in dismay—and aprons would have been unknown! Probably some of our gray-beards can remember, in the dim past, a crooked piece of wood covered with leather, a mouth-piece like the Trombone, and keys similar to the Ophicleide. These abominable instruments have all been called in by the inventor—Satan. Its invention has been ascribed to a French priest in 1590; but its quality of tone, as well as its name, point to the *other party* as its originator. Berlioz "hits the nail on the head" when he says it is "expressive of all the horrors of death, and the vengeance of a jealous God!" The Serpent is a transposing instrument standing in B $\flat$ . The music is written in the Bass clef, and a whole tone above the real sounds. It has the following compass:—



Serpent parts may be found in the scores of many of the old masters. Mendelssohn was about the last to write for it. See his Oratorio "St. Paul," and "Meeresstille" Overture. The part is now-a-days played by the Euphonium, or sometimes by the Tuba.

There are a few instruments, such as the Guitar, Banjo, Concertino and Flageolet, which do not properly come under the head of Orchestral instruments, but for the sake of completeness we will give a short sketch of each.

**THE GUITAR** (sometimes called Spanish Guitar) has six strings, usually tuned as follows:—



There are various other ways of tuning, for special pieces and keys. The three lower strings are of silk, overspun with silver wire, and the three upper are of gut. The music for the Guitar is written in the Treble clef, and its compass is from E to A, with the chromatic intervals. The sounds are an octave below the written note.



It is absolutely impossible to write well for the Guitar without being a performer upon it. It would occupy too much space to go into an explanation of the peculiarities and possibilities of the instrument. The student who wishes to study it, can do so more profitably by the aid of a Guitar instructor.

**THE BANJO.** So many improvements have been made on the original Banjo that it hardly resembles the miserable instrument of "ye olden time." The peculiar "twang," so characteristic of the "old Banjo," still remains, but it has been much softened in the improved instruments. The ordinary Banjo has five strings of gut, usually tuned thus:—





## CHAPTER XLII.

*Balance of Tone, Contrast and Color.*

The principal characteristics of good instrumentation are, a solid and well-balanced structure, with strong contrasts, and variety of coloring. Familiarity with the various Orchestral instruments is not alone sufficient to enable one to write in a way to fulfil the above conditions. However well we may understand the instruments, it will avail us little if we have not the faculty of *combining* them effectively. A very important, as well as difficult thing to learn, is to preserve the proper balance of tone; that is, not to double any interval of a chord so that it will cover up the others; not to spread the parts so far apart as to leave wide gaps between them, causing thinness; and not, on the other hand, to crowd everything too closely together, and produce a dull, heavy effect. Then, again, due attention must be paid to the *comparative strength of tone* of the various instruments and in their different octaves. Thus, a G (on the second line) played on the Clarinet, would be a weak tone compared to the same note played on almost any other instrument. If played on the Trumpet or Cornet, it would be heard above all the wood and stringed instruments, and could, if played *ff*, even hold its own with the rest of the brass in addition. In estimating the balance of tone, it must be taken into consideration whether a chord or passage is to be played *forte* or *piano*. A strong chord from the brass, written with a view to strength and sonorousness, would necessitate vigorous treatment for the rest of the Orchestra. The Violins would probably need to play on the upper strings, with double-stops and a *fortissimo* tremolo, while the wood instruments should be given their strongest available notes, providing, always, that they are the proper ones to be doubled. It will be obvious that no rules can be given on this subject, but that the composer must rely on his judgment and experience. Each particular case will differ in some respect from another, as in key; position in which the chord has to be taken; whether a sonorous, brilliant, or a sombre effect is required; the selection of certain instruments for their peculiar quality of tone, to give color to a chord for some special effect—these, besides hundreds of other details in the art of orchestration, must be left to the taste and genius of the composer. Set rules, even if it were possible to make them for every individual case, would only fetter the imagination, and put an end to all progress and originality. Only *general principles* can be given as a guide to the student, who will (if he has *talent*, and perseverance to cultivate it) soon discover for himself what is best under the circumstances to give effect to his ideas. To secure a perfect balance of tone, the distribution of the intervals of a chord among the stringed instruments must be carefully attended to. It has been said before, that without good management of the “strings” no solid work is possible. As a general rule in writing for voices, an interval of more than an octave is not allowed between any of the parts. The same general rule is applicable to instrumental parts. Wide intervals between them will be sure to cause thinness and lack of strength. Thus, the chord of C written for the strings as at (a) or (b) would sound thin, because of the distance between the Bass and the upper parts:—

(a)      (b)      (c)      (d)      (e)      (f)

1st VIOLIN

2nd VIOLIN

178.

VIOLA

CELLO & BASSO

As at (c) the effect would be sonorous, the chord being well dispersed; as at (d) and (e) full and rich, but lacking power and brilliancy as at (f) where the double-string is employed.

The following example, showing several different ways of scoring the chord of C for full Orchestra, will furnish an excellent study on the balance of tone. It is taken from Prout's work on Instrumentation (to which we are indebted for much valuable information), and we also quote some of his remarks on this subject.

"We here give twelve examples of this chord (C), all *forte*, from the works of the greatest masters of instrumentation:—

179.

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

FLAUTI

OBOI

CLARINETTI  
IN C

FAGOTTI

CORNI IN C

TROMBE  
IN C

TROMBONI

TIMPANI  
IN C, G

VIOLIN 1

VIOLIN 2

VIOLA

BASSI

Tr. Bass

Tub:

Pic

In F

8

Vc.

C.B.

1. Haydn: "Second Mass."

2. Mozart: "Clemenza di Tito."

3. Beethoven: "Overture, Op. 115."

4. Cherubini: "Faniska."

5. Schubert: "Symphony in C."

6. Weber: "Freischütz."

7. Mendelssohn: "Overture, Ruy Blas."

8. Rossini: "Stabat Mater."

9. Auber: "Masaniello."

10. Meyerbeer: "Les Huguenots."

11. Wagner: "Meistersinger."

12. Brahms: "Symphony in C Minor."

"The student may profitably employ hours in the analysis and comparison of these chords. \* \* \*

\* \* \* The examples are given nearly in chronological order, that the student may compare the older with the more modern styles of orchestration. Notice, first, the relative importance given in the various scores to the three notes of the chord—the root, the third, and the fifth; and then observe the distribution of the parts with reference to the comparative strength of tone in the different octaves. It will be seen that in some cases (*e. g.*, Nos. 2, 3 and 11) the effect is especially brilliant, while in others (such as Nos. 6, 7 and 12) it is fuller, richer and more sonorous. All the combinations of tone given are effective, though the nature of the effects differs widely in the various chords."

A very good way to get a *condensed idea* of the "relative importance" of the three notes of the chord, is to select a chord and prick down the notes in a bunch as they occur in the score—taking care to give the Horn parts their correct place in the octave. To explain our meaning, we will select Nos. 3 and 11, spoken of above as "especially brilliant" and Nos. 7 and 12, as "fuller, richer and more sonorous."

The white notes represent the strings.

180.

If the student will examine No. 3 he will find the fundamental represented fourteen times, the third ten times, and the fifth only twice—each time by the G string of the Violins. In No. 11 the fundamental appears fifteen times, the third seven times, and the fifth five times. Here the fifth does not appear at all in the strings. No. 7 shows the best balance for the strings. It must not be forgotten when studying the balance of tone, that the string parts in a large Orchestra are doubled many times.

*Contrast* and *color* are of equal importance with balance of tone, for without them the Orchestra would rank little above many musical machines only capable of producing monotonous sounds. *Contrast* may be obtained by alternation between the different sections of the Orchestra—strings, wood and brass—or by a part of a section with others in the same group. Some examples here follow, which will explain the subject better than words.—



## OVERTURE: "OBERON."

WEBER.

181.

*Adagio sostenuto.*

FLAUTI

CLARINETTI  
IN A

FAGOTTI

CORNI IN D

CORNI IN A

TROMBE  
IN D

VIOLIN I

VIOLIN II

VIOLA

CELLO

The musical score is arranged in a standard orchestral format. The woodwinds (Flutes, Clarinets, Bassoons) and strings (Violins, Viola, Cello) are on the left, while the brass (Horns, Trombones) are on the right. The Flute part begins with a melodic line marked *Adagio sostenuto*. The Clarinet and Bassoon parts have a *ppp* marking. The Horn and Trombone parts have a *solo* marking. The Violin I part has a *dolce* marking. The Violin II part has a *p* marking. The Viola and Cello parts have a *pp* marking. The score includes various musical notations such as notes, rests, and dynamic markings like *ppp*, *solo*, *dolce*, *con sordini*, *p*, and *pp*.

The musical score is arranged in two systems of staves. The first system includes staves for Flutes, Clarionets, and strings. The second system includes staves for Horns, Flutes, Clarionets, and strings. The notation is in G major (one sharp) and 2/4 time. Key markings include *pp* (pianissimo), *pianissimo possibile*, *a 2* (second octave), *arco* (arco), and *pizz* (pizzicato). The strings are playing a rhythmic pattern of eighth notes, while the woodwinds and brass provide harmonic support.

Here we have, in the introduction to the Overture of "Oberon," one of the most beautiful illustrations of our subject ever written. The contrast between the three soft, full notes of the Horn, and the penetrating crispness of the strings in the following passage is very striking. Further on, the fairy-like passages for the Flutes and Clarionets, seem to drop like a shower of pearls into the rich, smooth-flowing tones below. The writer well remembers his surprise and delight, when first he heard that wonderful inspiration. Next follows (tenth bar) a *pianissimo* passage for the brass, which is contrasted in the next measure by the strings, the Flutes and Clarionets being used to give color to the accompaniment.





SYMPHONY: "EROICA."

*Allo con brio*

BEETHOVEN.

183.

FLAUTI

OBOI.

CLARINETTI  
IN B $\flat$

FAGOTTI

CORNI IN  
E $\flat$  1, 2

CORNO IN  
E $\flat$  3

VIOLINO I

VIOLINO II

VIOLA

CELLO  
E BASSO

*pizz Basso*

This page of musical notation, numbered 170, is titled "INSTRUMENTATION—THE ORCHESTRA." It contains 12 staves of music, likely for a string quartet or a small orchestra. The notation is written in a single system, with each staff containing a series of notes and rests. The music is in a key with two flats (B-flat and E-flat) and a 4/4 time signature. The notation includes various musical symbols such as notes, rests, and dynamic markings like *p*, *sf*, and *pp*. The staves are arranged in a single system, with some staves having additional markings like "Bassi" and "arco".

The notation is as follows:

- Staff 1: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 2: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 3: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 4: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 5: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 6: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 7: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 8: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 9: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 10: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 11: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.
- Staff 12: Treble clef, key signature of two flats, 4/4 time. It begins with a series of notes, followed by a rest, and then a series of notes. It includes a dynamic marking of *p* and a *sf* marking.

There are many other ways of obtaining contrasts besides those shown in the preceding examples. Contrasts may also be produced by a difference in rhythms; by *legato* against *staccato* passages; by *pizzicato* against sustained tones; by sudden changes from *piano* to *forte*, and from a full to a thin harmony and *vice versa*. All these, and more, the student will find in the scores of the best composers. To point out all the possible effects of contrast would be an endless task. We will, however, notice a few which occur in the various examples in this work.

In Ex. 127 the difference in rhythm between the wave-like accompaniment of the strings, and the sustained tones of the wind instruments, affords a very pretty contrast. In the second strain of Ex. 128 there is a good contrast between the *pizzicato* of the strings against the *legato* melody of the wind instruments, and also in the sudden change from *piano pizzicato* to the *forte col arco*. In Ex. 131 the Violins are contrasted with the Basses. In Ex. 136 we have the clear tones of the Flute in contrast with the reedy tones of the Bassoon, and at the end of the example (where the Basses come in) the strong contrast between the highest and lowest instruments of the Orchestra. Ex. 137 affords two kinds of contrast; that between the wind instruments, coming in one after the other, and between the *staccato* notes of the melody and the sustained harmony of the string accompaniment. In Ex. 147 we have the strongest kind of a contrast in the weighty *unison* of the Trombones and Tuba, with the strong, full chords from the balance of the Band. A very fine contrast in rhythm is that in the beginning of Ex. 155, where reed instruments have chords, *contra tempo*, against the sustained notes of the Bassoons and Horn. Several kinds of contrast may be found in Ex. 173. Compare the Flutes with the Violins, and near the end of the example notice how the passage for the Horns and Bassoons is followed by the Flutes and the sustained E of the Violins. The intelligent student will have no difficulty in discovering many other beautiful effects of contrast and color in this excellent example.

**COLOR.** What is the meaning of the word as applied to musical composition? None of the works on instrumentation give a clear and satisfactory definition of it, but go into vague generalities, mixing up *contrast* and *color* indiscriminately. And, in fact, the two are so intimately connected that it is doubtful if they can be well separated. Instrumental coloring and how to produce it, cannot be explained in words. It must be *heard* to be appreciated, and it is not probable that any given effect of color would so impress any two persons that they would agree in describing it. As many persons are "color-blind," that is, not able to distinguish colors, just so are many unable to appreciate the difference in quality of tone. It is the difference in tone which produces color. Thus, the stringed Orchestra is much superior to the brass-band in point of color, because the latter is composed of but one class of instruments, and is, therefore, incapable of producing much variety in the quality of tone. Some instruments are capable of producing different shades of color. Each string of the Violin has a character of its own, and the contrast between the first and fourth is quite marked. The tones of the Trombone vary considerably in character as they are played loud or soft, and the difference in quality of tone in the different registers of the Clarinet and Bassoon, is very noticeable. Now, in the consideration of this subject, it will, no doubt, be easy for the student to comprehend the fact, that each instrument has a tone-color peculiar to itself, and by which we identify it—exactly as we recognize an individual by the voice. Now, supposing a note is sounded which you know by the quality comes from the Oboe, and presently the Clarinet sounds the same note in connection with it, whereby we have a blending of the two qualities which produces a new color differing from that of either the Oboe or Clarinet alone, but which the ear of the musician detects as coming from those instruments. How is it possible to explain, in words, that new color? Every new quality of tone added to a mass of sound changes its color, and the possible combinations and varieties of color are countless. Thus, it will be seen how difficult it is to *teach* anything relating to instrumental coloring. It must be left to the *feeling* of the student. It is something which must be *born in him*, and which cannot be learned from books. Each individual will have ideas of his own on the subject. The styles of the great masters of instrumentation are very dissimilar, but who shall say they are not all good? It is this *inexhaustible variety* which gives music its undying power to invoke fresh charms with which to fascinate the mind.

A few more suggestions and some words of warning will close the chapter. The "besetting sin" of all beginners is to make their scores, as a well-known conductor once said, "too tick." Their motto seems to be "give every one plenty to do." They forget that *rests* have any value, and dread to see an open space in their scores. Students often say, "I don't know what to put in here." It is safe in such a case to advise "*rests*," "*rests*." What would become of the trio for Horns in the *Scherzo* of the "Eroica" Symphony (Ex. 168) if all the rests were filled up? How would the grotesque effect of the Bassoons in the "Midsummer Night's Dream" music (Ex. 167) be effected by the addition of other instruments? Suppose the lovely Horn solo in Ex. 172 had been as heavily instrumented as when it is heard upon its repetition, Ex. 173. The hearer would lose interest, and the ear become fatigued with the sameness. Examples 136, 139, 140, 141, 158, 159, 160, 165 and 166, illustrate the beautiful effects to be obtained by using a few instruments judiciously. In conclusion we would call attention to Ex. 129 as an excellent specimen of a well balanced, well contrasted and colored piece of instrumentation. Observe the first page, which looks decidedly empty. The 1st and 2nd Violins leading off with their long-sustained Cs, leave the hearer in doubt at first, as to the key which is to follow. The entrance of the Basses no sooner decides that than the low Cs of the Horns and the triplets of the Timpani add new interest to the gradually swelling mass of sound. At the tenth measure the Oboe adds a new color, by taking up the sustained C which the 2nd Violin drops, and in the next bar, the Clarionets and 2nd Violins take up the melody, which is imitated in the following bar by the Viola and Cello. Then come the Bassoons, followed in turn by the Flutes and Trumpets, with the ever-recurring triplet which was started by the Timpani in the sixth measure. Observe how the melodies are doubled to preserve the balance as the harmony thickens, and note the very sparing, but effective, use of the Trombones. As a whole, this example exhibits the principal characteristics of good instrumentation, namely: "A solid and well balanced structure, finely contrasted and well colored."



## CHAPTER XLIII.

*On Orchestral Accompaniments for Voices and Instrumental Solos.*

The Orchestra, when used to accompany the voice, must be regarded from a different point of view, the voice being now treated as of the first importance, the Orchestra occupying a subordinate position. The purpose of an accompaniment is to sustain the voice, and also to heighten its effect; therefore, care should be taken not to score so heavily as to overpower the voice, or to draw too much attention from it. The student will have many things to consider in scoring vocal music which it is impossible to enumerate here. Circumstances will alter cases. Thus, the kind of voice which is to be accompanied; the style of music; the number of instruments at his disposal—these, as well as many other points, have to be carefully weighed before putting pen to paper. The principles which would govern us in arranging the accompaniment to Schubert's *Serenade*, would need to be considerably modified for a song and dance. In vocal, as well as in instrumental music, the stringed instruments are chiefly to be relied on as the basis of our accompaniment. They are more easily subdued than wind instruments, and can be adapted to any style of accompaniment. There is always danger of the wind instruments overpowering the voice—*more especially the brass*. Horns are, however, an exception among brass instruments. There is something in their soft, mellow tones, which sustain voices, and on which they seem to float. As a rule, the melody should be left to the voice alone, the performer delivering it in his own way, the Orchestra following. Sometimes, however, in passages of a certain character, the melody may be doubled in the octave above or below; or, perhaps as a duet, with good effect. Every thing depends upon the character of the music, and the composer or arranger must be left to judge for himself what is best under all the circumstances. It should be remembered that balance of tone, contrast and color are of quite as much importance in vocal as in instrumental music; in fact, unless there is a proper appreciation of the balance of tone, the voice will very likely be completely "swamped." Comparatively few Soprano or Contralto voices have sufficient power to cope with an Orchestra of even moderate size. The universal complaint of solo singers is that the Orchestra is too loud. Male voices can usually bear much heavier instrumentation than those of females.

Probably most of our readers will only have occasion to arrange accompaniments for the small Orchestra. In that case there will always be a desire to utilize *all* the material at our command. Now, in my opinion, *the curse of the small Orchestra is the Cornet*, so far as vocal accompaniments are concerned. Its raw, blaring tone does not blend well with the voice, and if used for sustained tones (in place of Horns), it is difficult to sufficiently subdue the tone without spoiling it. It is very seldom indeed that the Cornet can be used *simultaneously* with the voice with good effect. When there are short intervals of rest in the vocal part, it may be introduced without disturbing the singer. Heavier instrumentation is of course required for choruses than for solo voices. We must be governed by the style of the music, as well as the strength of the chorus, in making our instrumental combinations. Most choral works are written in four parts, and the accompaniments should be so managed that they will not obscure the working of the voices, but assist in bringing them out in bolder relief if possible. Take, for example, a Fugue for four voices. It may easily be spoiled by introducing something in the instrumental accompaniment which does not properly belong to the Fugue. The instruments should assist the voices in such a way, that the hearer can the more readily distinguish their entrance and follow them on their course. If the student will examine the choruses in Handel's "*Messiah*," he will find that, with few exceptions, the instruments merely duplicate the vocal parts. If modern composers use more "filling up," they are careful to support the vocal parts by a sufficient number of instruments to keep them well defined. An apt student could learn more of the art of instrumenting vocal music by close attention to one performance of an Opera or Oratorio, than from all the books ever written on the subject. Not that books are worthless, but it is next to impossible to express in words, that which can only be understood or appreciated by actual performance with the Orchestra. If the student has musical instinct, and a taste cultivated by hearing the best works performed, he will not be likely to go far wrong. The student should, if possible, obtain the full Orchestral scores of Handel's "*Messiah*" and Mendelssohn's "*St. Paul*," and make them a close study. They illustrate two very different styles, and show how these great composers treated both the solo and chorus. Full scores of large vocal compositions being expensive, the next best thing is to procure vocal scores with Piano accompaniment. Novello's editions of Oratorios and Operas are the best for the purpose of study, as they indicate the instruments as they occur in the Orchestral score, so that a tolerably fair idea of the instrumentation may be had.

Orchestral accompaniments for solo instruments should be arranged on the same principle as for solo voices. The solo instrument must not be overpowered. Contrast between the principal part and accompaniment must be attended to. The power and tone-quality of the solo instrument must be considered, so that, while we select the best instruments for contrast, we shall not score too lightly or too heavily for the tone of the solo instrument. Thus, an accompaniment for a Violin solo would require more delicate treatment than one for a Trombone. In solos for wind instruments it is customary not to use instruments of the same kind in the accompaniments, in order that the contrast will be more striking. An exception to this rule will be observed in solos for the Cornet. The prevailing style of performance on this instrument is to tear everything to tatters—to exhibit the powers of wind and lip, rather than the musical capabilities of the instrument. Hence, unless a couple of Cornets and two or three Trombones assist in the *tuttis*, they will seem weak in comparison with the solo. Space cannot be afforded for long examples illustrating this branch of our subject, and short extracts are of little value. The whole of a work should be studied; a few bars will not give an idea of the general plan.

As a thorough knowledge of the subject is only obtained by analyzing the scores of Concertos for the different instruments, we give herewith, for the information of students who may wish to procure them, a short list of Concertos which have accompaniments for Orchestra:—

FLUTE—Romanza, Siciliana in G Minor.....	Weber
OBOE—Concertini in F, Op. 110.....	Kalliwoda
CLARINET—Concerto, Op. 107.....	Mozart
Concerto No. 1, Op. 73.....	Weber
Concerto No. 2, Op. 74.....	Weber
Concerto No. 1, Op. 26.....	Spohr
Concerto No. 2, Op. 57.....	Spohr
Variations with Orchestra, Op. 128.....	Kalliwoda
BASSOON—Concerto in B $\flat$ .....	Mozart
Fantasia with Orchestra .....	Neukirchner
HORN—Concerto No. 1, Op. 92.....	Mozart
Concerto No. 2, Op. 105.....	Mozart
Concerto No. 3, Op. 106.....	Mozart
Elegie and Rondeau for Chromatic Horn, Op. 153..	Reissiger

Examples of Violin and Violoncello solos are very numerous, nearly every performer of importance on these instruments having written for them. The well known Violin Concertos of Beethoven and Mendelssohn, have beautiful Orchestral accompaniments, which the student should not fail to study. There are many published Concertos for the Pianoforte (with Orchestra) by Beethoven, Weber, Schumann, Liszt, Rubinstein and others, from which the industrious student may gather much useful information respecting the art of writing Orchestral accompaniments.

## CHAPTER XLIV.

*On the Formation of Scores.*

The arrangement of the instruments in a score will not always be found the same. Formerly different authors had ways of their own, but modern writers are more uniform in laying out their scores. Some of the old editions of Haydn's and Mozart's scores are arranged in the following order, commencing at the top of the page: Violins, Viola, Flutes, Oboes, Clarionets, Bassoons, Horns, Trumpets, Timpani, Cello and Basso.

In an old edition of Mozart's "Marriage of Figaro," the instruments are placed in the following order, commencing at the top: Timpani, Trumpets, Horns, Flutes, Oboes, Clarionets, Bassoons, Violins, Viola, Cello and Basso. Schumann's Symphony in E flat has the same arrangement, but with the addition of Trombones, which are placed between the Bassoons and Violins.

Meyerbeer, in the fourth act of the "Huguenots," places the instruments as follows: Violins, Violas, Flutes, Oboes, English-Horn, Clarionets, Bassoons, Horns, Trombones, Ophicleide, Bells in F-C, Voices, Cello, Double-Bass.

So far as I can learn the plan of placing a part of the stringed instruments at the top of the score is no longer in use. The method now most generally followed for the Grand Orchestra is that shown in examples 155 and 177. In the introduction to Wagner's "Lohengrin," the score is in the following form: Three Flutes, two Oboes, one English-Horn, two Clarionets in A, one Bass Clarionet in A, three Bassoons, two Horns in E, two Horns in D, three Trumpets in D, three Trombones, one Bass-Tuba, Timpani in A-E, Cymbals, four Violins in separate parts, Violas, Cellos, Contrabasses.

Wagner places the Piccolo part at the top of the score (see Ex. 177), but it is sometimes placed below the Flute, as in Beethoven's Overture to "Egmont," where he writes in the beginning for 1st and 2nd Flutes, but in the finale the 2nd Flute is changed for the Piccolo.

In modern scores, the Harp part is usually placed above the Violins, as are also instrumental solo parts. The usual place for voice parts, is between the Viola and Basses, and should there be an Organ part, it is placed between the voices and the instrumental Basses.

A score should be arranged so that it can be easily read, and this is best accomplished by forming the instruments in groups, thus: Wood, Brass, Percussion, Strings.

In consequence of the Horns being much used in combination with wood instruments, it is customary to place them above the Trumpets, notwithstanding they are lower in pitch. This brings the Trumpets next to the Trombones—an advantage, as they are so often used together.

Below is a table with the names of the notes in the different languages, taken from Prout's Instrumentation. The student will find it useful for reference:

ENGLISH.	ITALIAN.	FRENCH.	GERMAN.
C	Do	Ut	C
C flat	Do bemolle	Ut bemol	Ces
C sharp	Do diesis	Ut diese	Cis
D	Re	Re	D
D flat	Re bemolle	Re bemol	Des
D sharp	Re diesis	Re diese	Dis
E	Mi	Mi	E
E flat	Mi bemolle	Mi bemol	Es
E sharp	Mi diesis	Mi diese	Eis
F	Fa	Fa	F
F flat	Fa bemolle	Fa bemol	Fes
F Sharp	Fa diesis	Fa diese	Fis
G	Sol	Sol	G
G flat	Sol bemolle	Sol bemol	Ges
G sharp	Sol diesis	Sol diese	Gis
A	La	La	A
A flat	La bemolle	La bemol	As
A sharp	La diesis	La diese	Ais
B	Si	Si	H
B flat	Si bemolle	Si bemol	B
B sharp	Si diesis	Si diese	His



## PART III.

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# INSTRUMENTATION—THE MILITARY BAND.

## CHAPTER XLV.

The great increase, within the last few years, in the number of amateur musical organizations throughout the country, is an encouraging sign of the general interest taken in the beautiful art of music. Not only in the large cities do we find these organizations of amateurs, but almost every neighborhood in the country has its village Brass Band. While a large majority of these country bands do not attain to a very high degree of excellence in consequence of the innumerable obstacles with which they are beset; still, they should receive credit for their love of music, and the enthusiasm with which they practice it under many difficulties. Amateur musicians in our cities, know very little of the trials and perplexities of these country bands; how they are victimized with poor instruments; the difficulties of procuring competent teachers to give them a proper start in the world; inability, from various causes, to keep the bands up to their full strength; how the members go, often on foot, for miles through mud and storm to attend band-practice; and all this for the love of music!

We propose to devote this part of our work to the treatment of THE MILITARY BAND, which we shall divide into three classes:—

First, THE BRASS BAND.

Second, THE SMALL REED BAND (Brass with Clarionets and Piccolo).

Third, THE FULL MILITARY BAND, (which includes most of the wind instruments in use at present).

There is no regular or uniform system observed in the organization of bands in either of the above classes; their formation depending as much upon necessity or caprice as upon a scientific knowledge of the requirements of music. We shall adopt, however, for our purpose, the formations which are in most common use, and notice any deviations therefrom which may seem necessary.

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## CHAPTER XLVI.

### *The Brass Band.*

Most Brass Bands are formed on the following plan:—

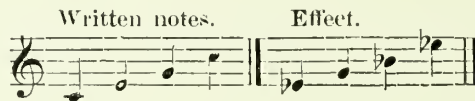
- 2 (or 3) Cornets in E $\flat$  (*Sopranos*), sounding a minor third above the written note.
- 2 (or 3) Cornets in B $\flat$  (*Altos*), sounding a major second below the written note.
- 2 (or 3) Altos in E $\flat$  (*Tenors*), sounding a major sixth below the written note.
- 2 Tenors in B $\flat$  (*Baritones*), sounding as written when played from the F clef.
- 1 Baritone in B $\flat$  (*Euphonium*), sounding as written when played from the F clef.
- 1 Bass in B $\flat$  (*Baritone*), sounding as written when played from the F clef.
- 2 Tubas in E $\flat$  (*Basses*), sounding as written when played from the F clef.
- Snare Drum, Bass Drum and Cymbals.

Sometimes there is one E $\flat$  Tuba, and a Contra Bass Tuba in B $\flat$ , which usually plays from a part similar to the small B $\flat$  Bass.

We will notice each of the above-mentioned instruments in their order, commencing with the Cornet in E $\flat$ .

## CHAPTER XLVII.

THE CORNET IN  $E\flat$  is the highest in pitch of all the brass instruments in general use. Some instruments have been made in higher keys, but they are so scarce that they require no notice here. The  $E\flat$  Cornet is a transposing instrument, and its *sounds* are a *minor third* above the written note:—



It has a compass of about two octaves and a half:—



but the notes above the the staff are difficult to produce, owing to their extreme acuteness. In general practice it is better not to write above G, and even that note often proves troublesome, when the lips are fatigued by long playing. Many performers find it difficult to descend to the lowest notes of the scale, but with a good instrument and a little practice they will come out as well as any of the others.

$E\flat$  Cornet players should not be required to play without frequent rests, as the strain is too great to be long endured; therefore, the melody should be divided between the two  $E\flat$  Cornets, or between the  $E\flat$  and  $B\flat$  Cornets, as the case may be. There seems to be a growing tendency to ignore the Cornet in  $E\flat$  as a leading instrument and to use in its stead the  $B\flat$  Cornet. The  $E\flat$  Cornet is no doubt a much superior instrument as regards quality of tone, being more flexible, and easier to play in the medium; but the  $E\flat$  Cornet can produce the high notes of the scale with more ease and certainty than the  $B\flat$  Cornet. For instance, if we wish to write the following passage from a Piano part, it would have to be written a note higher for the  $B\flat$  Cornet, and it would be impossible for nine-tenths of the  $E\flat$  Cornet players to execute it; but, on the  $E\flat$  Cornet it would not only come out easier, but with a better quality of tone:—



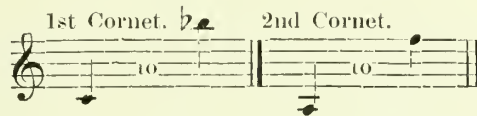
The  $E\flat$  Cornet is comparatively free from the screaming, fearing quality of tone so common to the high notes of the  $B\flat$  Cornet when played *forte*. Power and brilliancy being the chief qualities of the  $E\flat$  Cornet, it is not so well adapted as the  $B\flat$  to the delivery of slow movements, which require a sympathetic quality of tone for their proper rendition.

The  $E\flat$  Cornet is most at home in keys with but few flats or sharps at the signature. Very little band music is written for it with more than two sharps, or more than three flats. Execution on the  $E\flat$  Cornet, as well as on all the valved-instruments, becomes more difficult, and the instrument less perfectly in tune the further we depart from the normal key. The sharp keys are brilliant and effective for Marches and other light pieces, while the flat keys are better for Dirges and music of a sombre character.

## CHAPTER XLVIII.

THE  $E\flat$  CORNET has already been treated as an Orchestral instrument in Chapter XXV (to which the student is referred), but it will necessarily have to be managed somewhat differently in the Brass Band. In the Orchestra it was considered a subordinate instrument, but in the Brass Band it will be given a more prominent position.

The compass, for Brass Band use, may be roughly stated to be from low  $C$  to upper  $E\flat$  for the 1st, and from low  $A$  to  $F$  for the 2nd Cornet:—



Of course, this is only given as *about* the average compass. A note higher or lower will often be desirable, or necessary, according to the ability of the performer, or the exigencies of the music. It will be much safer, however, in arrangements intended for purely amateur bands, not to write much above the staff. As a general thing amateurs do not practice enough to acquire very strong embouchures, consequently, after playing a few minutes they are unable to get the higher notes, and the arrangement is often condemned for the faults of the performer.

The  $B\flat$  Cornet is a *perfect fourth below* the  $E\flat$  Cornet in pitch; therefore, music for it, to be in unison with the  $E\flat$ , must be written a *perfect fourth above* the  $E\flat$  part; that is, if the  $E\flat$  part be in  $C$  the  $B\flat$  part must be transposed to  $F$ , thus:—



The  $B\flat$  Cornet may be written for as a solo instrument, or in unison with the  $E\flat$  Cornet in *forte* passages, or as an accompanying instrument in after-notes or sustained tones. Its adaptability makes it the most important instrument in the band. As mentioned in the previous chapter, it is better adapted to slow, expressive movements, which require a full, sonorous tone, than the  $E\flat$  Cornet. Of late years it has become a very popular instrument for the performance of songs and ballads.

## CHAPTER XLIX.

THE  $E\flat$  ALTO is, in pitch, an *octave below* the  $E\flat$  Cornet, and a *perfect fifth below* the  $B\flat$  Cornet. It sounds a *major sixth below* the written note:—



Although called an *Alto*, the real voice of this instrument is a *Tenor*. It corresponds to the highest male voice, which is a *Tenor*; the  $E\flat$  Cornet corresponding to the highest female voice, which is a *Soprano*.



The compass of the E♭ Alto is from F♯ to C, and even higher :—



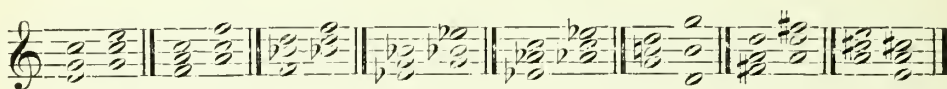
but in practice it seldom exceeds the limit of the staff, the higher notes being better given to the B♭ Cornet, and the lower to the B♭ Tenor. Thus, the lower C♯, which is of rather doubtful intonation, can be played in better tune, and with more sonorousness, on the Tenor, the sound being the same on both instruments :—



The notes above G, are more effective on the B♭ Cornet, the sounds being the same on both instruments :—



Still, it may sometimes be desirable to carry the notes above or below the staff, especially when the Alto is used as a solo instrument; but for purposes of harmony it is not necessary to go outside the staff to obtain full chords with three Altos, as the following in various keys will show :—



The three Altos, in accompaniments, will take about the range shown in the above example. When the 1st Alto takes a melody part, the 2nd and 3rd are usually pushed up to take the place of the 1st and 2nd in accompanying parts. In *forte* passages higher notes may be written than in *piano* passages, thereby getting more volume of tone :—



The "Solo Alto" was formerly the favorite instrument for doubling melodies in the octave below the Cornets, and had but little in the way of accompaniment assigned it, but the Baritone has in a great measure supplanted it on account of its richer quality of tone. Melodies which have a high range throughout, and which frequently run up from D to G, may be written for the Alto instead of the Baritone, the sounds being the same on both instruments :—



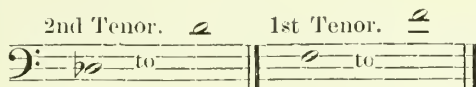
It will be seen from the above that these notes are within easy reach of the Alto, but for the Baritone they run up to the top of its compass. See chapter on Baritone.

## CHAPTER L.

THE  $B\flat$  TENOR (in reality a Baritone in pitch) is used for parts which were formerly played on Slide Trombones. Its pitch is an octave below the  $B\flat$  Cornet, and it belongs to the same family of instruments. The compass of the Tenor is about the same as the Trombone, the notes sounding as they are written when played from the Bass clef:—



Tenors being used principally for filling up the harmony, the extreme notes are not often employed. The portion of the scale most used is from  $B\flat$  to F:—



For many players a further curtailment may be found advantageous. When the Tenor is used to play Trombone parts it is treated as a non-transposing instrument, but it has become quite common to treat it as a transposing instrument and to write its part in the Treble clef, in which case it is written for the same as a  $B\flat$  Cornet, standing an octave lower. This state of things is much to be regretted; not only on account of the trouble and confusion caused by having music written in different ways for an instrument, but also because of the increased cost of publishing where two sets of parts for one and the same instrument have to be printed. Thus, many publishers print parts in both the Treble and Bass clefs for the 1st and 2nd Tenors, Baritone and  $B\flat$  Bass. If every player would take the trouble to learn the clef which usually belongs to his instrument—not such a terrible task as some people imagine—this needless expense would be avoided. In Europe the Tenor is called by different names. In England it is the Althorn in  $B\flat$ , or the Tenorhorn; in some German scores the Bassflugelhorn in B; in music published in Belgium the Baryton; and in France the Saxhorn. The music is written in every case in the Treble clef; but the parts are not arranged like the Trombone, which are always written in the Tenor or Bass clefs. The parts written for Tenors resemble those for Cornets rather than Trombone parts. This has reference to those large bands where both valved Tenors and Slide Trombones are used.

When it is necessary to change the Tenor part from the Bass to the Treble clef, it is the simplest thing in the world to transpose it a perfect fifth lower on the staff; that is, if the part in the Bass clef stands in the key of  $E\flat$ , it must be written in the Treble clef in the key of F; thus:—



It is hardly necessary, at present, to give examples of the usual way of writing Tenor parts, as they will be abundant in future pages. Being mostly of the simplest description, the intelligent student will have no difficulty in comprehending their scope at a glance.

## CHAPTER LI.

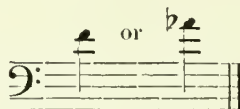
THE BARITONE is the same in pitch as the  $B\flat$  Tenor, but its caliber is somewhat larger, and consequently its tone fuller and of a more sonorous quality. In Europe, the Euphonium, which has a still larger caliber, takes the part played here on the Baritone. The  $B\flat$  Baritone with three valves has the following compass, with all the chromatic intervals:—



Many performers can play still higher, and by the aid of a *fourth valve*, several notes lower:—



For amateurs, it will be safer not to write above  $\Delta b$ , and probably, oftentimes,  $F$  will prove to be high enough:—

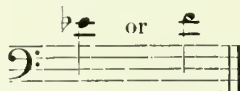


The lower notes of the scale are usually less troublesome than the extreme high ones, but even these are sometimes not well given. Extreme notes at either end of the scale are hazardous for the average amateur. It is always well, when writing for publication, to keep the fact in view that very few amateurs, taking the country through, have perfect command of their instruments. And, however much we may desire to please the *professional musician* by writing up to the capacity of an instrument, we must remember that probably not one *amateur* in a hundred would be able to play a first-class part. It is far better to write within the mark than to overstep it; for even one part poorly executed, will ruin the effect of the best arrangement. Those who write for Bands with which they are acquainted, have the advantage of being able to fit each performer with a part suited to his ability. In this way a Band may play acceptably, notwithstanding some of its members may not be quite up to the standard of excellence. As an old band-teacher once remarked, "write so that the 'dogenheads' won't make mischief."

The Baritone, when written for in the Bass clef, is a non-transposing instrument, the actual sounds being the same as the notes on paper. When the Treble clef is used it is treated as a transposing instrument in  $B\flat$ , and the music must be written in the same key as the  $B\flat$  Cornet, but the pitch will be an octave lower, and the *actual sounds* a major ninth below the written note. The process of changing music for the Baritone, from the Bass to the Treble clef, is the same as that described in the preceding chapter for the  $B\flat$  Tenor. The Baritone is used chiefly as a solo instrument, and for playing melodies in octaves with the Cornets. By the addition of this lower octave, thinness in the melody is avoided. In case a melody runs too high for the Baritone, a Bass part may be written for it instead, and the melody transferred to the Alto. Melodies of every grade, from the brilliant March or Galop, to the most impressive adagio are suitable for the Baritone. There is very little music written for the Cornet that a good performer on the Baritone cannot play. Arpeggios, when not too rapid, may be written for the Baritone, and sustained tones in the upper portion of the scale are effective. When Bases are written for it, they may be in the octave above the Tuba, or in unison with it, as may be most convenient for the compass of the instrument; but it is better not to run the parts too high. The *sounds* of the Baritone and Tuba are identical when played from the same part in the *Bass clef*. The usual manner of writing for the Baritone will be amply illustrated in examples which are to follow further on, and the immense quantity of published Band music furnishes material for studying almost every style of writing for the instrument.

## CHAPTER LII.

**THE  $B\flat$  BASS.** The pitch and compass of the  $B\flat$  Bass is the same as the Baritone, but the extreme upper notes are more difficult on account of its larger caliber. There is seldom occasion to write above  $E\flat$  or  $F$ :—



and for the generality of Bases from  $B\flat$  to  $D\flat$  is high enough:—



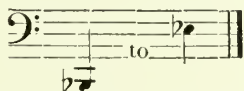
This instrument, though called a Bass, is only a Baritone of large caliber. In my opinion it is of little value as a Bass—and good for nothing else. Its place could be more profitably filled by a 1st Tuba in  $F$ , or  $E\flat$ . There is nothing lost, but much to gain, by duplicating Tubas. It is asking too much from a single Tuba, to furnish sufficient Bass for even a medium-sized Band, and the help of a  $B\flat$  Bass is of the most uncertain kind, especially as it is often played by the poorest players in the Band, and who are liable to fail altogether if left alone. We sometimes hear it said that the  $B\flat$  Bass fills up a gap between the Tubas and the harmony parts above. Let us see if there is really a "gap" to be filled.



The "harmony" instruments next above the Tubas are the B♭ Tenors (considering the Baritone as a solo instrument). The B♭ Tenors are, in fact, Baritones, and therefore as near Basses as it is possible for them to be. They are precisely the same in pitch as the B♭ Bass, the only difference being in the *quality of tone* caused by the difference in the size of the bore. In pitch, the B♭ Bass is a fifth above the E♭ Tuba, and so are the Tenors and Baritone. Pray, where is the "gap" which a B♭ Bass can fill with more advantage than a Tuba? In cases where the 2nd Tuba runs very low, the octaves above can be much better given by an E♭ or F Tuba, than by a B♭ Bass with its thick, tubby tone. There seems to be little use in wasting space on this worthless instrument. The student will have no difficulty in writing parts for the B♭ Bass; they are usually a mere copy of the Tuba parts, as will be seen by comparison.

## CHAPTER LIII.

THE TUBA IN E♭ is most generally used in Brass Bands. Its compass, and other particulars regarding it, will be found in Chapter XXXVI, where it was treated as an Orchestral instrument. For Brass Bands, it will be necessary to limit its upward compass considerably. For plain Basses, it need not exceed this:—



but for solos, it may be carried up three or four notes higher if necessary. The Tuba in E♭ is a non-transposing instrument. In some countries of Europe (Belgium and France for example) all Tubas but the one in C are treated as transposing instruments, the music, however, being written in the Bass clef. Thus, for a piece of music in E♭, the Tubas would be arranged on the following plan:—

184.

CORNETS IN E♭

CORNETS IN B♭

ALTOS OR HORNS  
IN F

TROMBONES (Slide)

TUBA IN E♭

TUBA IN B♭

TUBA IN F

TUBA IN C

REMARKS ON EXAMPLE 184.—We have given E♭ and B♭ Cornets, F Altos and B♭ Trombone parts in the above example for the purpose of showing how they correspond with the Tuba parts in the same keys; thus, the E♭ Cornet and the E♭ Tuba are written in the same key, the only difference being in the clefs, and it is the same with the B♭ Cornets and B♭ Tuba, and again, with the F Horns and the F Tuba.

The C Tuba and the Trombones, being non-transposing instruments, also agree in key. This system of writing for Bases is much more complicated than the one practiced in this country, where they are *all* treated as non-transposing instruments—the player learning to sound the *real note*, no matter what key his Tuba may be pitched in. Thus, the *tone* E♭:—



would be made "open" on the E♭ Tuba, with the first valve on the F Tuba, with the second and third valves on the C Tuba, and so on.

The Tuba is capable of considerable execution, but rapid passages should not be too long, as the breath is very rapidly exhausted on all large instruments. Short passages of six or eight notes in a measure—Quick Step or Polka time—ought to be executed by a fairly good performer, but the great mass of Bass parts consist of from two to four notes in a bar, which ordinary Bass players can easily manage. The best keys for the E♭ Tuba are E♭, A♭, D♭, G♭ and B♭. The key of F, although a brilliant key for a Military Band, as a whole, is not likely to be so well in tune on the E♭ Tuba as the keys mentioned above, for the reason that the F below the staff is often too sharp when taken with the first and third valves—the only way it can be played on a three-valved Tuba. On a Tuba with four valves the fourth valve can be used instead of the first and third, which will usually make the note in better tune. The key, in Brass Band music, is arranged more for the convenience of the Cornets, than for the other instruments, because the execution of difficult passages depends mostly upon them.

## CHAPTER LIV.

THE SNARE DRUM, BASS DRUM AND CYMBALS have been discussed in Part II; therefore, they will need but few additional remarks regarding their use in the Brass, or full Reed Band. For Concert, or in-door music, the Drums and Cymbals should be sparingly used. In Marches it is best, even in *piano* passages, to let them beat the time—say once or twice in a measure, as it helps to emphasize the rhythm, and, when on the march, relieves that sense of weakness which is so apparent when the Drums stop beating. The Drum parts may be scored on one staff, the Cymbals and the Bass Drum being usually the same; but if there be room in the score, one staff may be given to the Snare Drum and another to the Bass Drum and Cymbals. The latter is the best plan in Concert music, where it may be necessary to write a separate part for the Cymbals, thus:—

Three staves of musical notation for percussion instruments. The top staff is labeled 'SNARE DRUM' and contains a treble clef, a 2/4 time signature, and a series of notes with dynamic markings 'p' and 'sf'. The middle staff is labeled 'CYMBALS' and contains a bass clef and notes with dynamic markings 'sf'. The bottom staff is labeled 'BASS DRUM' and contains a bass clef and notes with dynamic markings 'f' and 'sf'.

When the Triangle, Bells, or other percussion instruments are used in the Military Band, they are treated just the same as in the Orchestra; see Part II in reference to them.

## CHAPTER LV.

### *On Scoring for the Brass Band.*

We will now endeavor to explain the process of arranging music for the Brass Band, which is ordinarily composed of the instruments we have just reviewed. The simple Brass Band is the easiest of all Bands to arrange for, as we have instruments in only two keys—E♭ and B♭—to deal with. The fact that part of them are treated as transposing and part as non-transposing, need not cause us serious trouble. Ability to transpose music from one key to another is all there is of it; and those who cannot do that, had better go back to the beginning of the book and study intervals. At any rate, it is taken for granted

that the student is familiar with all the keys and their signatures, as well as with the different chords and their progressions, as shown in Part I. Having already devoted as much space as could be spared to the harmonization of melodies (see Principles of Harmony), we shall proceed to show how arrangements may be made from vocal music, or Piano scores. Let us make a beginning on something which, however familiar, it is hoped the student will not treat with contempt. Although *musicians* may not derive the comfort from the old tune which *Christians* seem to enjoy, they may at least adopt it for "precept and example." We give an arrangement of "Old Hundred" for four voices, in the key of A $\flat$ , which, if desired, can be sung to the accompaniment of the brass instruments. For the first attempt we will arrange it for a quartette only, selecting the E $\flat$  and B $\flat$  Cornets, the Alto and the Baritone. We will place the instrumental score beneath the vocal parts for greater convenience in comparing them:—

**185.**

## VOICES

**185.**  
VOICES

Soprano.  
Alto.  
Tenor  
Bass.

**E♭ CORNET**

**B♭ CORNET**

**E♭ ALTO**

**BARITONE**

This musical score is for the song 'The Rose Tree' (No. 185). It is arranged for a vocal quartet (Soprano, Alto, Tenor, Bass) and a brass section consisting of two E♭ Cornets, an E♭ Alto, and a Baritone. The music is in 2/4 time with a key signature of two flats (B♭ and E♭). The vocal parts feature a melody with a prominent dotted half note in the final measure of each line. The instrumental parts provide harmonic support, with the cornets and alto playing a similar melodic line to the voices, and the baritone providing a bass line. The score is presented on a single page with a large, bold number '185.' at the top left.

A musical score for the song 'The Rose Tree'. It consists of two systems of staves. The first system has a treble and bass staff with a key signature of two flats and a common time signature. The melody is in the treble staff, and the bass staff provides a simple accompaniment. The second system continues the melody and accompaniment. The music is written in a simple, accessible style suitable for a children's song.



In the foregoing, the instruments merely duplicate the voice parts. Observe that the E $\flat$  Cornet is made to *sound* the same as the Soprano voice by writing its part a minor third below that for the voice. The E $\flat$  Cornet part is written one note (a major second) above the Alto part. The part for the E $\flat$  Alto is written a major sixth above that of the Tenor voice, and the Baritone (being non-transposing) plays the part as it stands for the Bass voice. In the third and fourth measures the E $\flat$  Cornet and E $\flat$  Alto parts run rather low—more especially for the Alto. Now, in case we have a B $\flat$  Tenor at our disposal, that defect can be obviated by an exchange of parts and a more perfect arrangement will probably result.

The voice parts will be distributed in the following order: The E $\flat$  and B $\flat$  Cornets will sustain the Soprano part, the E $\flat$  Alto the Contralto part, the B $\flat$  Tenor the Tenor, and the Baritone the Bass, as before. Either the E $\flat$  or B $\flat$  Cornet may be dispensed with in this arrangement, but I should prefer to retain the B $\flat$  Cornet, providing both performers were equally good. The B $\flat$  Tenor, being a non-transposing instrument, will play the Tenor voice part without alteration. Here is the new arrangement:—

**186.**

E $\flat$  CORNET

B $\flat$  CORNET

E $\flat$  ALTO

B $\flat$  TENOR

BARITONE

We will make one more arrangement of this Choral for the full Brass Band, that the student may discover, by comparison with the above, how to supply the additional parts. The few extra notes for the Basses do not interfere with the vocal parts, which may be sung as in Ex. 185:—

# 187.

E♭ CORNETS

B♭ CORNETS

1st ALTO

2nd and 3rd  
ALTOS

1st TENOR

2nd TENOR

BARITONE

B♭ and E♭  
BASSES

SNARE DRUM

BASS DRUM  
& CYMBALS

The musical score for Ex. 187 is arranged in ten staves. The first seven staves are for brass instruments: E♭ CORNETS, B♭ CORNETS, 1st ALTO, 2nd and 3rd ALTOS, 1st TENOR, 2nd TENOR, and BARITONE. The eighth staff is for B♭ and E♭ BASSES. The ninth staff is for SNARE DRUM, and the tenth staff is for Bass Drum & CYMBALS. The music is written in common time (C) and includes various musical notations such as notes, rests, and dynamic markings.

We will take for the next example the Russian National Hymn, the Piano score of which is given below in the key of G :—

188.

Piano score for the Russian National Hymn in G major, measures 1-8. The score is written for piano and includes dynamic markings such as *f* (forte) and *ff* (fortissimo), and a *dim* (diminuendo) marking. The key signature is one sharp (F#) and the time signature is common time (C).

What key shall we select for the Brass Band arrangement? It is evident that the key of G will be rather too high for the E♭ Cornet and too low for the B♭ Cornet, which would play in C. If A♭ is chosen the E♭ Cornet will play in F and the B♭ Cornet in B♭. This will be an inconvenient key for the latter, as the melody will run too high. If we take the key of E♭ the highest note for the E♭ Cornet will be C, and the lowest C—the compass of an octave; for the B♭ Cornet the range will be from F to F. This being the best key for both instruments, we will select it. Now, to transpose from the key of G to E♭, it will be necessary to write a third lower *in pitch*. The melody part must be written a *perfect fifth lower* for the E♭ Cornet, and *one tone lower* for the B♭ Cornet than in Ex. 188.

The student should compare, note by note, the Piano part with the Band score :—

**189.** *Maeſtoso*

Brass Band score for the Russian National Hymn in E♭ major, measures 1-8. The score is written for various instruments: E♭ CORNETS, B♭ CORNETS, 1st ALTOS, 2nd and 3rd ALTO, 1st TENOR, 2nd TENOR, BARITONE, B♭2 BASS AND TUBA, and DRUMS AND CYMBALS. The key signature is three flats (B♭, E♭, A♭) and the time signature is common time (C). Dynamic markings include *ff* (fortissimo) and *tr* (trill). The drum part includes trill markings (*tr tr tr tr*).



The musical score is arranged in ten staves. The first six staves are for woodwinds and voices: 1st B♭ CORNET, 2nd B♭ CORNET, 1st ALTO, 2nd ALTO, 3rd ALTO, and a Bass staff. The last two staves are for percussion: SNARE DRUM *tr tr* and BASS DRUM AND CYMBALS. The music is in 2/4 time. Dynamics include *f* (forte) and *ff* (fortissimo). The score includes various musical notations such as notes, rests, and slurs. The first staff has a first ending bracket labeled '1' and a second ending bracket labeled '2'. The percussion parts use specific notation for snare and cymbal patterns.

The student should now, for practice, make an arrangement for himself from Ex. 188, and when finished, compare it with Ex. 189, and endeavor, if possible, to improve upon his own arrangement as well as upon the model.

Our former attempts at scoring have been confined to pieces where all the voices have progressed simultaneously, or very nearly so. We will now try our hand on something of a lighter character—where the voices, or parts, do not move together. The following Waltz ("Immortellen," by Gung'l) will answer our purpose. The Piano part is given in the original key, and is, for the student's convenience, placed beneath the Band score. We shall choose the key of B♭ for our arrangement. The student should make another for practice, in some other key—say E♭. We shall not enter upon any long explanation of "how to do it." Careful study and comparison of the Piano part and score, will convey the idea better than written directions:—

190.  
E♭ CORNETS

Staff 1: E♭ Cornets, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note G4 in measure 2, a half note A4 in measure 3, and a half note B4 in measure 4.

B♭ CORNETS

Staff 2: B♭ Cornets, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note F4 in measure 2, a half note G4 in measure 3, and a half note A4 in measure 4.

1st ALTO

Staff 3: 1st Alto, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note E4 in measure 2, a half note F4 in measure 3, and a half note G4 in measure 4.

2nd and 3rd  
ALTOS

Staff 4: 2nd and 3rd Altos, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note D4 in measure 2, a half note E4 in measure 3, and a half note F4 in measure 4.

1st and 2nd  
TENORS

Staff 5: 1st and 2nd Tenors, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note C4 in measure 2, a half note D4 in measure 3, and a half note E4 in measure 4.

BARITONE

Staff 6: Baritone, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note B3 in measure 2, a half note C4 in measure 3, and a half note D4 in measure 4.

B♭ BASS  
AND TUBA

Staff 7: B♭ Bass and Tuba, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note A2 in measure 2, a half note B2 in measure 3, and a half note C3 in measure 4.

DRUMS

Staff 8: Drums, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note G2 in measure 2, a half note A2 in measure 3, and a half note B2 in measure 4.

PIANO

Staff 9: Piano, measures 1-4, 3/4 time signature. The staff shows a whole rest in measure 1, followed by a half note F4 in measure 2, a half note G4 in measure 3, and a half note A4 in measure 4.

This page contains 16 staves of musical notation, arranged in two columns of eight. The notation is for a military band, featuring various instruments. The staves are numbered 1 through 16. The notation includes notes, rests, and dynamic markings such as *f* (forte), *p* (piano), and *crs* (crescendo). The music is written in a key signature of one sharp (F#) and a 2/4 time signature. The notation is complex, with many notes and rests, and some staves have additional markings like *crs* and *f* or *p* markings. The page is numbered 189 in the top right corner.



This musical score is for a military band and consists of 16 staves. The notation is as follows:

- Staff 1:** Treble clef, key of D major (two sharps). It begins with a first ending bracket labeled '1' and a second ending bracket labeled '2'. Dynamics include *p* (piano), *f* (forte), and *mp* (mezzo-piano).
- Staff 2:** Treble clef, key of D major. Dynamics include *p* and *f*.
- Staff 3:** Treble clef, key of D major. Dynamics include *mp* and *mf* (mezzo-forte).
- Staff 4:** Treble clef, key of D major. Dynamics include *mf* and *f*.
- Staff 5:** Treble clef, key of D major. Dynamics include *p* and *f*.
- Staff 6:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 7:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 8:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 9:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 10:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 11:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 12:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 13:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 14:** Bass clef, key of D major. Dynamics include *f* and *p*.
- Staff 15:** Treble clef, key of D major. Dynamics include *f* and *p*.
- Staff 16:** Bass clef, key of D major. Dynamics include *f* and *p*.

The score features various musical notations including eighth notes, sixteenth notes, and rests. It also includes dynamic markings (*p*, *f*, *mp*, *mf*) and articulation marks such as slurs and accents. The key signature remains D major throughout the piece.

This page contains a musical score for a military band, featuring ten staves of music. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is organized into two systems of five staves each. The first system includes a key signature change to one flat (B-flat) and a time signature change to 4/4. The second system includes a key signature change to two flats (B-flat and E-flat) and a time signature change to 3/4. The score is marked with dynamics such as *p* (piano), *f* (forte), and *ad lib* (ad libitum). The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is organized into two systems of five staves each. The first system includes a key signature change to one flat (B-flat) and a time signature change to 4/4. The second system includes a key signature change to two flats (B-flat and E-flat) and a time signature change to 3/4. The score is marked with dynamics such as *p* (piano), *f* (forte), and *ad lib* (ad libitum).

Copy Eighteen Measures of the Second Strain.

The musical score is arranged in 12 staves, organized into three groups of four staves each. The notation is as follows:

- Staff 1 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 2 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 3 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 4 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 5 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 6 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 7 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 8 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 9 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 10 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 11 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.
- Staff 12 (Treble Clef):** Starts with a whole rest, followed by a half note G4, and a half note F#4. Dynamics: *p*.

The score includes various musical symbols such as notes, rests, and slurs. Dynamics include *p* (piano), *f* (forte), *ff* (fortissimo), and *ff unison*.



For an example in the arrangement of Galops, we will take Ex. 153, and follow the Orchestral score as closely as possible :—

# Introduction.

## 191.

### Galop.

The musical score is arranged in 12 staves, each representing a different instrument or section of the military band. The time signature is 2/4. The key signature has one flat (B♭). The score includes various musical notations such as notes, rests, and dynamic markings.

- 1st and 2nd B♭ CORNETS:** The first staff, starting with a *ff* dynamic.
- 1st B♭ CORNET:** The second staff, starting with a *ff* dynamic.
- 2nd B♭ CORNET:** The third staff, starting with a *ff* dynamic.
- 1st ALTO:** The fourth staff, starting with a *ff* dynamic.
- 2nd and 3rd ALTI:** The fifth staff, starting with a *ff* dynamic.
- 1st and 2nd TENORS:** The sixth staff, starting with a *ff* dynamic.
- BARITONE:** The seventh staff, starting with a *ff* dynamic.
- B♭ BASS AND TUBA:** The eighth staff, starting with a *ff* dynamic.
- SNARE DRUM:** The ninth staff, starting with a *ff* dynamic.
- BASS DRUM & CYMBALS:** The tenth staff, starting with a *ff* dynamic.
- Triangle:** The eleventh staff, starting with a *p* dynamic.

The score includes various dynamic markings: *ff* (fortissimo), *sf* (sforzando), *p* (piano), and *ff* (fortissimo). The score also includes a *Triangle* part in the eleventh staff.

This page contains a musical score for a military band, featuring ten staves of music. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is organized into two systems of five staves each. The first system includes a bracketed section labeled '2' above the first two staves. The second system includes a bracketed section labeled 'ff unison' above the fourth staff. The score is written in a key signature of one flat (B-flat) and a 2/4 time signature. The dynamic markings include *f* (forte), *ff* (fortissimo), and *ff unison*. The notation is in a standard musical notation style, with notes and rests clearly visible on the staves.

This page contains ten staves of musical notation, likely for a military band. The notation is written in a single system, with each staff representing a different instrument or voice part. The key signature is one flat (B-flat), and the time signature is 4/4. The music features a variety of rhythmic patterns, including eighth and sixteenth notes, as well as rests. Dynamics such as *mf* (mezzo-forte) are indicated throughout. Articulation marks, including accents and slurs, are used to guide the performer. Some staves include triplets, marked with a '3' and a bracket. The notation is clear and professional, typical of a published musical score.



This page contains ten staves of musical notation, likely for a military band. The notation is written in a single system, with each staff representing a different instrument or voice part. The music is in 2/4 time, as indicated by the time signature at the bottom of the first staff. The key signature is one flat (B-flat), as shown by the key signature at the bottom of the first staff. The dynamics range from *ff* (fortissimo) to *p* (piano). The notation includes various musical symbols such as notes, rests, beams, and slurs. The first staff begins with a treble clef and a key signature of one flat. The subsequent staves use various clefs, including treble and bass clefs. The music is characterized by a mix of melodic lines and harmonic accompaniment, with some staves featuring more complex rhythmic patterns. The overall style is typical of early 20th-century military band music.

REMARKS ON EXAMPLE 191—We have treated the introduction on the same plan as in the Orchestral score—that is, reserved the Basses and Tenors for the heavy chords, by way of contrast to the unison passages of the upper instruments. It will be seen, by comparing them, that the Orchestral parts have been transferred as nearly as possible to the Brass Band score. It will often happen that passages which have been written for high instruments in the Orchestra, will have to be given to those of a lower pitch in the Brass Band, and *vice versa*. Sometimes it will be necessary to simplify difficult passages to make them feasible for Brass instruments. Thus, passages like the following, may be made easier by cutting out the passing notes, and still preserve the main or fundamental idea:—

*Allegro.*

In the fourth and eighth measures of the second strain, the E $\flat$  Cornet and the 1s. Alto have triplets *in small notes*, which may be played *ad libitum*. It is always well to write something easier in small notes, which can be played instead of difficult passages. In the above instance, however, the small notes are not essential—the real melody being in the large notes. We will here observe, that it is a good plan to write the melody, or any important part, in *small notes* for all the leading instruments in place of rests, so that, in case of absence or failure of a performer, it may be readily taken up by some one else. See the E $\flat$  Cornet part, the second strain of Ex. 190. It will not be necessary to give any examples for the arrangement of Marches or Quick Steps. If the student will take the trouble to copy the parts of good Marches in score, he will learn more of the art of arranging them, than from anything that can be written. The chief thing is to write practically, and I am not aware of any easier way to learn than to observe how the best composers write for the different instruments, and try to follow them as nearly as possible. Arrangements for marching purposes should be easy to play, and the rhythm should be strongly marked. The German Marches are deservedly popular for “street business,” and for the following reasons: The rhythm is well marked; they have plain, solid harmonies, with but few notes in a measure; they are constructed with a view to strength and volume of tone; and, withal, they possess the true *martial spirit*. In my opinion, Marches made up of the sickly, sentimental, namby-pamby songs of the day are unfit to be played on parade. The “Sweet Bye and Bye” and the “Who will Care for Mother Now?” style of Marches ought to be buried of out sight—only to be resurrected for Sunday-school pic-nics, baby shows and women’s rights conventions. Just imagine the glorious Seventh regiment of New York, marching off to the wars, their souls fired with martial ardor by the warlike strains of “Go to Sleep My Little Darling.”

There is a style of accompaniment which is difficult to execute properly on brass instruments, as for instance, in the introduction to the “Beautiful Rhine Waltzes,” example 127. The arpeggios being slurred, every little unevenness in the working of the valves is easily heard, so that difficult, or cross-fingered passages are seldom brought out smoothly. Accompaniments like those of Schibert’s *Serenade* are easier, as they are not to be played so legato; but even these are sometimes simplified by writing full instead of broken chords, thus:—

*Original.*                      *Simplified.*

Of course this changes the character of the accompaniment completely; but we must decide whether it is better, under all the circumstances, for the arranger to *butcher* the original according to law, or leave it for the performer to *assassinate*. A writer who knows the capacity of his players, can often manage to preserve the composers ideas by giving them to the most competent performers, leaving the poorer ones to fill in a few notes here and there. It is not always advisable, when arranging from a Piano copy, to follow it note for note—nothing more nor less. The arranger should look for appropriate places to introduce sustained tones, and if possible, something by way of contrast; but anything foreign to the spirit or design of a piece should be avoided.

We give here an arrangement of the Serenade previously mentioned, placing the Piano part beneath the Band score:—

## 193.

## LA SERENADE.

F. SCHUBERT.

*Moderato.*

E♭ CORNETS

1st B♭ CORNET

2nd B♭ CORNET

3rd B♭ CORNET

1st ALTO

2nd ALTO

3rd ALTO

1st B♭ TENOR

2nd B♭ TENOR

BARITONE

B♭ BASS

E♭ BASS

VOICE

PIANO

*solo.*

*mp*

*pp*

*dim*

*pp*

*pp*

*pp*

*pp*

*pp*

*Moderato.*



This musical score is for a piece titled "La Serenade," arranged for a military band. The score is written on 15 staves, organized into five systems of three staves each. The key signature is one flat (B-flat), and the time signature is 2/4. The notation includes various musical elements such as rests, eighth and sixteenth notes, triplets, and dynamic markings. The first staff begins with a *mp* (mezzo-piano) marking. The second staff starts with a *pp* (pianissimo) marking. The third staff has a *mp* marking. The fourth staff is marked *p* (piano). The fifth staff is also marked *p*. The sixth staff, which is the first of a new system, is marked *p*. The seventh staff is marked *p*. The eighth staff is marked *p*. The ninth staff is marked *p*. The tenth staff is marked *p*. The eleventh staff is marked *p*. The twelfth staff is marked *p*. The thirteenth staff is marked *p*. The fourteenth staff is marked *p*. The fifteenth staff is marked *p*. The score concludes with a final chord on the fifteenth staff.

This musical score is for a piece titled "La Sérénade" for a military band. It consists of 13 staves. The first six staves are in treble clef, and the last seven are in bass clef. The key signature has two flats (B-flat and E-flat), and the time signature is 2/2. The score includes various musical notations such as eighth notes, quarter notes, half notes, and rests. There are several triplets marked with a "3" and a slur. Dynamic markings include *p* (piano) and *pp* (pianissimo). The piece concludes with a final double bar line and a repeat sign.

This musical score is for a piece titled "La Serenade," arranged for a military band. The score is written for 12 staves, organized into four systems of three staves each. The first system includes a "1st" marking above the first staff. The key signature is one flat (B-flat), and the time signature is 2/2. The notation includes various musical elements such as rests, eighth notes, sixteenth notes, and triplets. The bottom two staves of the fourth system are marked with a forte "f" dynamic and a piano "pp" dynamic. The piece concludes with a final measure marked with a forte "f" dynamic.

1st

f

pp

f



A musical score for a military band, titled "La Serenade." The score is written for 12 staves, arranged in six pairs. The top six staves are in treble clef, and the bottom six staves are in bass clef. The key signature is one flat (B-flat), and the time signature is 2/4. The score is marked with dynamic levels: *f* (forte), *mf* (mezzo-forte), and *pp* (pianissimo). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. The bottom staff (bass clef) has a *p* (piano) marking at the beginning. The score is a single system, with the title "La Serenade." centered below the bottom staff.

La Serenade.

*D.S. f Coda.*

The musical score is arranged for a military band, consisting of 13 staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The first section is marked *D.S. f Coda.* and includes a *cres* (crescendo) marking. The second section also includes a *cres* marking. The third section is marked *pp* (pianissimo) and includes a *cres* marking. The fourth section is marked *pp* and includes a *cres* marking. The fifth section is marked *pp* and includes a *cres* marking. The sixth section is marked *pp* and includes a *cres* marking. The seventh section is marked *pp* and includes a *cres* marking. The eighth section is marked *pp* and includes a *cres* marking. The ninth section is marked *pp* and includes a *cres* marking. The tenth section is marked *pp* and includes a *cres* marking. The eleventh section is marked *pp* and includes a *cres* marking. The twelfth section is marked *pp* and includes a *cres* marking. The thirteenth section is marked *pp* and includes a *cres* marking.

A musical score for a military band, titled "La Serenade." The score is written for 12 staves, arranged in six systems of two staves each. The key signature is one flat (B-flat), and the time signature is 2/4. The music is in a 2/4 time signature. The score features a variety of musical notations, including eighth notes, sixteenth notes, and triplets. Dynamics such as *f* (forte) are indicated throughout. The piece concludes with a double bar line and repeat dots.

La Serenade.



This musical score is for a piece titled "La Serenade" for a military band. It consists of 13 staves, each representing a different instrument or section. The notation includes various musical symbols such as notes, rests, beams, and dynamic markings. The dynamics are marked as *p* (piano), *f* (forte), and *dim* (diminuendo). The score is written in a key signature of one flat (B-flat) and a 2/2 time signature. The first staff has a treble clef and a key signature of one flat. The second staff has a treble clef and a key signature of one flat. The third staff has a treble clef and a key signature of one flat. The fourth staff has a treble clef and a key signature of one flat. The fifth staff has a treble clef and a key signature of one flat. The sixth staff has a treble clef and a key signature of one flat. The seventh staff has a bass clef and a key signature of one flat. The eighth staff has a bass clef and a key signature of one flat. The ninth staff has a bass clef and a key signature of one flat. The tenth staff has a bass clef and a key signature of one flat. The eleventh staff has a bass clef and a key signature of one flat. The twelfth staff has a bass clef and a key signature of one flat. The thirteenth staff has a bass clef and a key signature of one flat. The score is arranged in a way that allows for a clear view of the instrumentation and the musical structure of the piece.

La Serenade.

This musical score is for a piece titled "La Serenade" for a military band. It consists of 14 staves. The first 13 staves are arranged in two systems of six staves each, with the 14th staff at the bottom. The notation includes various musical symbols such as treble and bass clefs, key signatures (one sharp and one flat), time signatures (2/4 and 3/4), and dynamic markings like *pp* (pianissimo) and *dim* (diminuendo). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. The overall style is characteristic of early 20th-century military band music.

REMARKS ON EXAMPLE 193.—Now, when an accompaniment of this kind proves too difficult for a young band, it may be changed to something like that shown in Ex. 192, or some of the parts may continue on one tone while the others play the regular moving accompaniment. See 3rd Alto part, measures 11, 12, 17, 18, 23, 24. It will be noticed that sustained tones have been introduced all through the piece—possibly too often. Students who are fond of experimenting, and have facilities for trying their work, can easily decide the matter by making a copy of the arrangement, and omit the sustained tones where they think proper. By trying both arrangements alternately the merits and demerits of each will be apparent. It should be remembered that sustained tones impart a richness to the harmony which is very desirable in Brass Band music, where so little variety of color or contrast can be had. A full, rich, Organ-like tone from the lower instruments is much to be preferred to that thin, snarling, snapping, and cracking quality so often heard. I may say here, that I regard the substitution of the Valve Trombone (so-called) for the ordinary Tenor as a mistake. Very little force in blowing will cause the tone to crack, and as these instruments are commonly used with Altos to fill up the harmony, the result is that the disagreeable prominence of these thin, cracking tones destroy the balance of the chords in which they are heard. These Valve Trombones should be treated differently from Tenors, and only as auxiliary instruments in larger Bands than we are now discussing.

Now and then some of the accompaniments in Ex. 193 run too low for the generality of players, for instance in measures 25 and 26 of the 3rd B♭ Cornet; measures 12, 13, 14, 16, 17 and 18 of the 2nd and 3rd Altos, and especially in the 23rd and 24th measures, where the Ds and C♯s are liable to be out of tune; and, in the 2nd E♭ Tenor part, from the 52nd measure to the end. It is for the student to devise a remedy that will not change the *general effect*. Care must be taken not to carry the accompaniment above the melody, at least not for more than a note or two at a time in order to avoid some difficulty. In case of an Alto or Baritone solo, it would, of course, be impossible to write full harmony without leading it above the solo part, but, as a rule, the harmony should be written below the melody. In Ex. 193, the solo part has been assigned to the B♭ Cornet. The student should make a score with the E♭ Alto as the solo instrument, and still another with the solo for the E♭ Cornet. Facility in writing will be acquired by these repeated attempts in different keys, and he will also learn to select those keys best adapted for the instruments which he desires to bring into prominence.

The Piano score stands in D minor (notwithstanding it *ends* in D major), while our Band score is in C minor. Should the E♭ Alto be given the melody just as it stands for the B♭ Cornet, the Band would play in F minor (four flats for the Basses), which would change the *pitch* of the piece a fourth higher, or a fifth lower than it now is, and a third above, or a sixth below the Piano score. For the E♭ Cornet as the solo instrument the key could remain as it is, in C minor, or be changed to E♭ minor (six flats for the Basses), the E♭ Cornet playing in C minor (three flats). In the latter case the *pitch* would be a half-tone higher than the Piano score.

The student may conclude from the foregoing, that all that is necessary to enable him to score from a Piano copy, is a knowledge of the compass and peculiarities of the various instruments, and the ability to transpose from one key to another. There are other things, however, to be thought of. The *balance of tone* must not be forgotten. The *leading tone* and the *dominant seventh*, or any other seventh for that matter, should not be doubled too often. It is the nature of these intervals of the chord to sound more prominently than the others. *One seventh* will be heard against the balance of the chord doubled many times. The same is true of the leading tone. If the dominant seventh is doubled too much, and is then "naturally resolved" by all the voices, the balance of the next chord, usually the tonic, will be destroyed by its third being too strong. As shown in the Principles of Harmony, Part I., the *third* should be the last interval of the *triad* to be doubled. *Sevenths* have still more penetrating qualities than thirds, therefore are still less adapted for doubling. In the last chord of Ex. 193, the fundamental appears *five times*, the fifth *four times*, and the third *twice*. Should each note be played with equal strength (which is frequently not the case), the chances are that the third will be sufficiently strong. Possibly, the fifth may be too prominent, and it may be better to give the 1st B♭ Tenor the C above instead of G, which the Baritone and 3rd Alto also have. The powerful tone of the Baritone will insure a sufficient volume to compensate for the loss of the Tenor.

When arranging Orchestral music for Brass Bands we often find passages which are impracticable for brass instruments. Thus, a Violin passage like the following:—





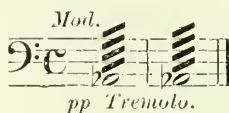
would have to be played on Cornets without the tremolo, and such passages as this:—



would have to be changed to something like the following, always keeping as near as possible to the original:—



A tremolo, such as is easily executed on stringed instruments, is an impossibility with the Brass Band. Supposing we wish to arrange the following Double-bass part for a Tuba:—



An attempt to play the tremolo as written would be ridiculous, and one long sustained tone would not give the effect. Playing rapidly a note above or below the *A* would more nearly resemble a shake than a tremolo. The best substitute is to give the note to two or three instruments, each playing in a different rhythm, thus:—

BARITONE

1st TUBA

2nd TUBA

This gives a feeling of agitation, not equal, however, to the original, but probably as near as it is possible to get from brass instruments.

The student who arranges music from Orchestral scores will find many opportunities for exercising his ingenuity in "adapting" it for the Brass Band. It is, of course, impossible to point out every difficulty that may arise, and prescribe the treatment for it. The student must exercise his judgment, and, as we have said before, endeavor to retain the spirit of the original. We will give a couple of examples of arranging from the full Orchestral score, which may be somewhat of a guide in that kind of work. The first will be from Ex. 129, "The Merry Wives of Windsor" Overture. We shall not be able to reproduce all the beautiful effects of the Orchestral arrangement, but we can preserve the main features of the original, which has been followed pretty closely, so far as the notes are concerned. Where there is any deviation, the student will discover the reason therefor. The effect which is produced in the Orchestra by the few notes of the Trombones will be missed in the Brass Band arrangement. We have no instruments which can be held in reserve for such effects. Although the same notes are played by the Alto, Baritone and Bass, the effect is lacking, because these instruments have a different quality of tone from Trombones, and, moreover, the sudden entrance of a new color, which is the cause of the effect in the Orchestra, is wanting. The Snare Drum, too, is a miserable substitute for the Timpani where a definite note should be given, as in this case.

194.

*Andante mod.*

E♭ CORNETS

1st E♭ CORNET

2nd and 3rd B♭ CORNETS

1st ALTO

2nd and 3rd ALTOS

1st TENOR

2nd TENOR

BARITONE

BASSES

DRUMS

pp

*ad lib*

pp

unison

pp

p

cres

p

cres

pp

pp

p solo

p solo

pp

p solo

p

Snare Drum muffled.

p





This page contains a musical score for a military band, featuring ten staves of music. The notation is written in treble and bass clefs, with various dynamic markings and articulations. The staves are arranged in two groups of five, with the first group on the left and the second group on the right. The music is written in a key signature of one flat (B-flat) and a 2/4 time signature. The dynamics include *f* (forte), *sf* (sforzando), and *fp* (fortissimo piano). The notation includes various note values, rests, and slurs, indicating a complex and dynamic piece of music.

Dynamic markings: *f*, *sf*, *fp*.

For the next example we will make an arrangement of No. 177, which is an extract from Wagner's Overture to Tannhäuser. It is a rugged bit of instrumentation, but we shall endeavor to show that it can be brought within the scope of a good Brass Band:—

## 195.

*Molto vivace*

1st E $\flat$  CORNET *ff* *ff* *ff*

2d E $\flat$  CORNET *ff* *ff* *ff*

1st B $\flat$  CORNET *ff* *ff* *ff*

2d B $\flat$  CORNET *ff* *ff* *ff*

3d B $\flat$  CORNET *ff* *ff* *ff*

1st E $\flat$  ALTO *ff* *ff* *ff*

2d E $\flat$  ALTO *ff* *ff* *ff*

3d E $\flat$  ALTO *ff* *ff* *ff*

1st TENOR *ff* *ff* *ff*

2d TENOR *ff* *ff* *ff*

BARITONE *ff* *ff* *ff*

BASSES *ff* *ff* *ff*

TRIANGLE *tr* *tr* *tr*

SNARE DRUM (muffled) *ff tr* *tr* *ff*

TAMBOURINE *ff* *ff* *ff*

CYMBALS *ff* *ff* *ff*

A page of musical notation for a piano piece, featuring multiple staves with complex rhythmic patterns and dynamic markings like ff and f. The notation includes various musical symbols such as notes, rests, and dynamic markings. The page is a single system of music, likely from a larger score. The notation is in a standard musical format, with staves and notes. The dynamic markings are prominent, indicating a range of volume from fortissimo (ff) to forte (f). The overall style is that of a classical or romantic era piano composition. The page is a single system of music, likely from a larger score. The notation is in a standard musical format, with staves and notes. The dynamic markings are prominent, indicating a range of volume from fortissimo (ff) to forte (f). The overall style is that of a classical or romantic era piano composition.



This page of musical notation is for a military band, featuring 12 staves. The notation is arranged in two systems of six staves each. The first system includes staves for various woodwinds and brass instruments, with dynamics such as *ff* (fortissimo) and *tr* (trill) indicated. The second system includes staves for percussion and other instruments, also with dynamics like *ff* and *tr*. The notation includes various musical symbols such as notes, rests, and accidentals, and is written in a style typical of early 20th-century musical scores.

This musical score is for a military band and consists of 14 staves. The notation is as follows:

- Staff 1:** Treble clef, key of B-flat major. Features a melodic line with accents and a *ff* dynamic marking.
- Staff 2:** Treble clef, key of B-flat major. Features a more complex melodic line with slurs and a *ff* dynamic marking.
- Staff 3:** Treble clef, key of B-flat major. Features a melodic line with a *ff* dynamic marking.
- Staff 4:** Treble clef, key of B-flat major. Features a sustained harmonic line with a *ff* dynamic marking.
- Staff 5:** Treble clef, key of B-flat major. Features a sustained harmonic line with a *ff* dynamic marking.
- Staff 6:** Treble clef, key of B-flat major. Features a melodic line with slurs and a *ff* dynamic marking.
- Staff 7:** Treble clef, key of B-flat major. Contains whole rests and a *ff* dynamic marking.
- Staff 8:** Treble clef, key of B-flat major. Contains whole rests and a *ff* dynamic marking.
- Staff 9:** Bass clef, key of B-flat major. Contains whole rests and a *ff* dynamic marking.
- Staff 10:** Bass clef, key of B-flat major. Contains whole rests and a *ff* dynamic marking.
- Staff 11:** Bass clef, key of B-flat major. Features a melodic line with a *ff* dynamic marking.
- Staff 12:** Bass clef, key of B-flat major. Contains whole rests.
- Staff 13:** Treble clef, key of B-flat major. Features a melodic line with a *ff* dynamic marking and a trill (*tr*) in the final measure.
- Staff 14:** Bass clef, key of B-flat major. Features a sustained harmonic line with a *ff* dynamic marking.





This musical score is for a military band and consists of 14 staves. The notation is as follows:

- Staff 1:** Treble clef, melodic line with eighth and sixteenth notes, marked *ff* at the end.
- Staff 2:** Treble clef, melodic line with eighth and sixteenth notes, marked *ff* at the end.
- Staff 3:** Treble clef, melodic line with eighth and sixteenth notes, marked *ff* at the end.
- Staff 4:** Treble clef, sustained notes, marked *ff* at the end.
- Staff 5:** Treble clef, sustained notes, marked *ff* at the end.
- Staff 6:** Treble clef, melodic line with eighth and sixteenth notes, marked *ff* at the end.
- Staff 7:** Treble clef, sustained notes, marked *ff* at the end.
- Staff 8:** Treble clef, sustained notes, marked *ff* at the end.
- Staff 9:** Bass clef, sustained notes, marked *ff* at the end.
- Staff 10:** Bass clef, sustained notes, marked *ff* at the end.
- Staff 11:** Bass clef, melodic line with eighth and sixteenth notes, marked *ff* at the end.
- Staff 12:** Bass clef, sustained notes, marked *ff* at the end.
- Staff 13:** Treble clef, sustained notes, marked *ff* at the end.
- Staff 14:** Bass clef, sustained notes, marked *ff* at the end.

At the bottom of the page, there are additional markings for trills and fortissimo dynamics:

- Staff 13: *tr* (trill) above the staff, *ff tr* below the staff.
- Staff 14: *tr* (trill) above the staff, *ff tr* below the staff.

The musical score consists of 14 staves. The first 10 staves are for woodwinds and brass, with dynamics like *f* (forte) indicated. The last four staves (11-14) are for the brass band, featuring a trill exercise marked with *tr* and *f*.

With this example we dismiss the BRASS BAND. Many things remain unsaid for want of space, but we have endeavored to touch upon the most important points. Much may be found in future chapters that will apply to Brass as well as Reed Bands.

## CHAPTER LVI.

*The Small Reed Band.*

The instruments used in most of the Reed Bands throughout the country are, in addition to the usual Brass Band, a Piccolo, an E♭ Clarinet, and as many E♭ Clarionets as can be obtained. I have never yet heard of a case where there was a surplus of *good* Clarionets. The Piccolo and Clarinet have been treated in Part II. The student is referred to the chapters on those instruments. But few additional remarks are necessary regarding their use in the Reed Band.

If the student has learned to write well for the Brass Band, the Clarionets need not give him trouble, for they are in the same keys as the Cornets, and their pitch is also the same—the only difference being in the compass.

The Piccolo commonly used in Reed Bands I shall assume stands in D♭, although it is much better known as an E♭ instrument. There has been much ink and ire (and possibly gore) expended in debating the question, but I shall only refer the student to Chapter XXII, the whole of which I hope he will read carefully, and then, “having paid his money, he can take his choice.” It matters little what we call it; the main point is to know how to write for it. The pitch of the D♭ Piccolo is a *minor ninth above* the written note. Thus, C on the E♭ Cornet or Clarinet, and D on the Piccolo will give us the *sound* of E♭, as follows:—

The diagram shows two staves of music. The top staff is labeled 'PICCOLO' and the bottom staff is labeled 'E♭ CORNET'. Both staves are in treble clef. The Piccolo staff has a key signature of one flat (B♭) and a common time signature (C). It shows a written note on the first line (C) and an effect note on the second line (D). The E♭ Cornet staff has a key signature of one flat (B♭) and a common time signature (C). It shows a written note on the first line (C) and an effect note on the first space (E♭). The labels 'Written note.' and 'Effect.' are placed below the notes on the Piccolo staff.



The following diagram will show the relationship of the different instruments in the usual keys for Reed Bands:—

**196.**  
PICCOLO

**E♭ CORNET or CLARINET**

**B♭ CORNET or CLARINET**

**BASSES**

Written notes. Real sounds. *Sca* ~~~~~

**C♭**

**G♭**

Two octaves above Cornets.

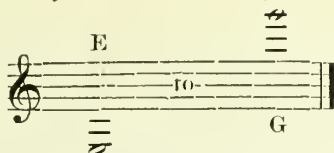
**D♭** **A♭** **E♭**

Written notes. Real sounds. *Sca* ~~~~~

**B♭** **F** **C**

The lower notes of the Piccolo are weak, and in *forte* passages of very little account. On the other hand the very high notes are too piercing for *piano* passages. What was said in Chapter XXIII on the Piccolo, will also apply here.

In the Reed Band, Clarionet parts may extend over nearly the whole compass of the instrument:—



but we must be governed by circumstances in taking the highest notes, as they are inadmissible for *piano* passages. C should be about the limit where delicacy of tone is required. Clarionets are used in the Reed Band very much as Violins are in the Orchestra. They are serviceable either as leading or accompanying instruments. In arpeggios like those for Clarionets in examples 124 and 129, and for playing, in the Reed Band, string passages like those in example 127, they are invaluable.

In *Marches* I think *all* the Clarionets should play the melody, or in duetts with it. 2nd and 3rd Clarionets can add little or nothing to the strength of a band by playing "after notes" with the Altos and Tenors. The notes in the second register of the Clarionet are weak, and when short, detached notes are played the sound is not sonorous enough to carry far in the open air. Besides, the notes usually written as "after notes" for Clarionets are written also for the 2nd and 3rd B $\flat$  Cornets, and there can be no possible use in doubling them with Clarionets. In Bands where both Trombones and Tenors are employed there is seldom lack of strength in the "filling up"—on the contrary it is often too loud for the upper instruments; therefore, I should prefer to write only the melody and duetts for the Clarionets, with holding notes now and then for variety.

Music intended for publication should be so arranged that it can be played with or without Clarionets. An arrangement for the brass may be made first, and the reed parts added afterwards. Passages intended especially for Clarionets may be written in *small notes* for the brass instruments, to be played only as occasion may require, thus:—

## 197.

## MARCH FROM TANNHAUSER.

WAGNER.

*Allegro.*

E $\flat$  CLAR

1st B $\flat$  CLAR

2nd & 3rd B $\flat$  CLAR

B $\flat$  CORNET.

F $\flat$  CORNET

1st F $\flat$  COR

2nd & 3rd F $\flat$  CORNETS

ALTOS

BARITONE

2nd and 3rd Clarionets

SNARE DRUM

*stacc*

*p*

*ff*

*ff*

*pp*

*solo*

*pp*

Musical score for a military band arrangement. The score consists of eight staves. The first four staves are for the main melody, featuring staccato and triplet patterns. The fifth staff is for Clarionets, marked *p*. The sixth staff is for the 2nd and 3rd Clarionets, marked *ff*. The seventh and eighth staves are for the 2nd and 3rd Clarionets, marked *p*.

Clarionet parts may be added to any of our examples on Brass Band arrangement. Thus, the Reed parts to No. 189 might be as follows:—

Musical score for Reed parts. The score consists of five staves. The first staff is for Piccolo, marked *ff*. The second staff is for Eb Clarinet, marked *ff*. The third staff is for 1st Bb Clarinet, marked *ff*. The fourth and fifth staves are for 2nd & 3rd Bb Clarinet, marked *ff*.



With Clarionets we can introduce open, or dispersed harmony occasionally, as in the first part of the above hymn, which is not always possible with brass instruments alone on account of their more limited compass. It is advisable to keep a sharp lookout for open, or consecutive fifths when dispersed harmony is employed. Had the 2nd and 3rd Clarionet parts been inverted in the last four measures of the above example, faulty progressions would have appeared:—



No. 193 would be greatly improved by the addition of Clarionets. The accompaniment would be easier for them than for the brass instruments, and the responses, which are given to the  $E\flat$  Cornets, would present a sharper contrast with Clarionets. The Coda would also be improved by giving the reeds the answers to the Solo Cornet:—

**199.**  
PICCOLO

*Coda.*

$E\flat$  CLAR

1st  $E\flat$  CLAR

2nd & 3rd  $E\flat$  CLAR

SOLO CORNET

The musical score for No. 199 is arranged for a Reed Band. It features five staves: Piccolo,  $E\flat$  Clarinet, 1st  $E\flat$  Clarinet, 2nd & 3rd  $E\flat$  Clarinet, and Solo Cornet. The key signature is one sharp (F#), and the time signature is 3/4. The score includes a Coda section. Dynamics include *p* (piano), *cres* (crescendo), *f* (forte), and *mp* (mezzo-piano). The Solo Cornet part has a *p* dynamic in the first measure of the Coda. The  $E\flat$  Clarinet parts have *cres* and *f* dynamics. The Piccolo part has a *mp* dynamic. The 1st  $E\flat$  Clarinet part has a *p* dynamic. The 2nd & 3rd  $E\flat$  Clarinet part has a *p* dynamic. The Solo Cornet part has a *f* dynamic. The score is written for a Reed Band, with the Solo Cornet part being the most prominent.

The student is recommended to score, from the Piano copy, the whole of No. 193 for the Reed Band, and afterwards compare his work with the Band score. He can then make any alterations which may be suggested by the comparison.

We will make another arrangement of No. 190, for the purpose of showing how the treatment for a Reed Band may differ, somewhat, from that of a pure Brass Band. The key of  $E\flat$  has been chosen for this arrangement, but we could have taken  $B\flat$ , had we desired to do so. We are not so much restricted in our choice of keys for the Reed Band, as the compass of the leading instruments is greater. It may be noticed that the  $E\flat$  Cornet has not been given a very prominent part in the following score, and I would suggest that in the Reed Band—especially in Concert music—if used sparingly it will be all the more effective in the *tutti* passages. In music for marching it should, of course, be written for more fully.

WALTZ: IMMORTELEN.

GUNG'IL.

500.

PICCOLO

E♭ CLAR'T

1st B♭ CLAR

2nd & 3rd B♭ CLARIONETS

E♭ CORNETS

1st B♭ CORNET

2nd & 3rd B♭ CORNETS

1st ALTO

2d & 3d ALTOS

1st & 2nd TENORS

1st & 2nd TROMBONES

BASS TROM (or B♭ Bass)

BARITONE

TUBAS

SNARE DRUM

BASS DRUM & CYMBALS

This page of musical notation is a score for a piano, likely from a 19th-century publication. It consists of 13 staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics range from *pp* (pianissimo) to *f* (forte). There are also markings for *cres* (crescendo) and *p* (piano). The score is written in a key signature of one flat (B-flat) and a time signature of 2/4. The notation is arranged in a standard format with a treble clef on the first staff and a bass clef on the last staff. The page is numbered 'A' in the top right corner.



This musical score is for a military band and consists of 14 staves. The notation is as follows:

- Staff 1:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*) and a fortissimo (*f*) dynamic.
- Staff 2:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 3:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 4:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 5:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*) and fortissimo (*f*) dynamic.
- Staff 6:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 7:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*) and fortissimo (*f*) dynamic.
- Staff 8:** Treble clef, key of D major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 9:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*) and fortissimo (*f*) dynamic.
- Staff 10:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 11:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*) and fortissimo (*f*) dynamic.
- Staff 12:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.
- Staff 13:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*) and fortissimo (*f*) dynamic.
- Staff 14:** Bass clef, key of B-flat major. Features a melodic line with a crescendo (*cres*), fortissimo (*f*), and piano (*p*) dynamics.

The score includes various musical notations such as notes, rests, and dynamic markings (*cres*, *f*, *p*) to guide the performance.

1 2

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *p* *f* *p*

*f* *pp* *f* *pp*

*f* *pp* *f* *pp*

*f* *p* *p* *f* *p*

*f* *p* *f* *p*

*f* *mf*

*f* *mf*

This page of musical notation is for a military band, featuring 15 staves. The notation includes various instruments and dynamic markings. The staves are arranged in a system, with some staves having a treble clef and others a bass clef. The key signature is one flat (B-flat). The dynamic markings are as follows:

- Staff 1: *f*, *p*, *f*, *p*
- Staff 2: *f*, *p*, *f*, *p*
- Staff 3: *f*, *p*, *f*, *p*
- Staff 4: *f*, *p*, *f*, *p*
- Staff 5: *f*, *p*, *f*, *p*
- Staff 6: *f*, *p*, *f*, *p*
- Staff 7: *f*, *p*, *f*, *p*
- Staff 8: *f*, *p*, *f*, *p*
- Staff 9: *f*, *p*, *f*, *p*
- Staff 10: *f*, *pp*, *f*, *pp*
- Staff 11: *f*, *pp*, *f*, *pp*
- Staff 12: *f*, *p*, *f*, *p*
- Staff 13: *f*, *p*, *f*, *p*
- Staff 14: *mf*, *pp*, *f*, *pp*
- Staff 15: *mf*, *pp*, *f*, *pp*



1. *ff*  
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This page contains musical notation for a military band, consisting of 14 staves. The notation is arranged in a system with a grand staff (treble and bass clefs) for the first two staves, and then individual staves for various instruments. The key signature is one sharp (F#), and the time signature is 2/4. The notation includes various musical symbols such as notes, rests, beams, and slurs, indicating a complex piece of music. The staves are numbered 1 through 14, and the notation is written in a clear, professional style.

A much more satisfactory arrangement of No. 129 can be made with reed instruments than was possible with brass alone. The effect of the long sustained upper C of the 1st Violin can be given more exactly with the Clarionet. We score a portion, leaving the balance for the student to finish. He should make his arrangement *from* No. 129, and then compare it with No. 194. With this example we close the chapter on the Small Reed Band, trusting we have made it sufficiently clear to enable the student to apply the general principles which should govern him in making arrangements of the various styles of music:—

**201.**

FLUTE

*Andante mod.*

The musical score is for No. 201, titled "FLUTE". It is in 2/4 time and marked "Andante mod.". The score is written for a variety of instruments, including Flute, Clarinet, Clarionets, Cornets, Alts, Tenors, Trombones, Baritone, Tubas, and Drums. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is arranged in a standard musical format with staves for each instrument.

**FLUTE**

**E♭ CLAR'T**

**1st B♭ CLAR**

**2nd & 3rd B♭ CLARIONETS**

**E♭ CORNETS**

**1st B♭ CORNET**

**2nd & 3rd E♭ CORNETS**

**1st ALTO**

**2d & 3d ALTOS**

**1st & 2nd TENORS**

**1st & 2nd TROMBONES**

**3rd TROMBONE (or B♭ Bass)**

**BARITONE**

**TUBAS**

**DRUMS**

*pp*

*p*

*p p*

*p*

*p*

*pp* Drum muffled.



This musical score is for a military band and consists of 14 staves. The notation is as follows:

- Staff 1:** Treble clef, key of D major. It begins with a rest, followed by a triplet of eighth notes marked *p*, and then a triplet of eighth notes marked *mf*.
- Staff 2:** Treble clef, key of D major. It contains a half note marked *cres* and a half note marked *mf*.
- Staff 3:** Treble clef, key of D major. It contains a half note marked *mf*.
- Staff 4:** Treble clef, key of D major. It contains a half note marked *mf* and a triplet of eighth notes marked *mf*.
- Staff 5:** Treble clef, key of D major. It begins with a rest, followed by a triplet of eighth notes marked *pp*, and then a triplet of eighth notes marked *mf*.
- Staff 6:** Treble clef, key of D major. It begins with a rest, followed by a half note marked *pp*, then a half note marked *cres*, and ends with a half note marked *mf*.
- Staff 7:** Treble clef, key of D major. It begins with a rest, followed by a half note marked *p*, then a triplet of eighth notes marked *mf*, and ends with a triplet of eighth notes marked *mf*.
- Staff 8:** Treble clef, key of D major. It contains a half note marked *p* and a half note marked *mf*.
- Staff 9:** Treble clef, key of D major. It contains a half note marked *p* and a half note marked *mf*.
- Staff 10:** Bass clef, key of B-flat major. It contains a half note marked *cres* and a half note marked *mf*.
- Staff 11:** Bass clef, key of B-flat major. It contains a half note marked *mf*.
- Staff 12:** Bass clef, key of B-flat major. It contains a half note marked *cres* and a half note marked *mf*.
- Staff 13:** Bass clef, key of B-flat major. It contains a half note marked *mf*.
- Staff 14:** Bass clef, key of B-flat major. It contains a half note marked *mf* and a triplet of eighth notes marked *mf*.

Dynamic markings include *pp* (pianissimo), *cres* (crescendo), *p* (piano), *mf* (mezzo-forte), and *unison*.

This musical score is for a military band and consists of 13 staves. The notation is as follows:

- Staff 1:** Treble clef, key of D major (two sharps). It begins with a piano (*p*) dynamic and features a melodic line with eighth-note patterns and slurs.
- Staff 2:** Treble clef, key of D major. It begins with a piano (*p*) dynamic and contains a melodic line with slurs.
- Staff 3:** Treble clef, key of B minor (two flats). It begins with a piano (*p*) dynamic and contains a melodic line with slurs.
- Staff 4:** Treble clef, key of B minor. It begins with a piano (*p*) dynamic and contains a chordal accompaniment of eighth notes.
- Staff 5:** Treble clef, key of B minor. It begins with a piano (*p*) dynamic and contains a melodic line with slurs.
- Staff 6:** Treble clef, key of B minor. It begins with a piano (*p*) dynamic and contains a melodic line with slurs.
- Staff 7:** Treble clef, key of B minor. It contains a melodic line with slurs.
- Staff 8:** Treble clef, key of B minor. It begins with a piano (*p*) dynamic and contains a melodic line with slurs.
- Staff 9:** Treble clef, key of B minor. It begins with a piano (*p*) dynamic and contains a chordal accompaniment of eighth notes.
- Staff 10:** Bass clef, key of B minor. It begins with a piano (*p*) dynamic and contains a chordal accompaniment of eighth notes.
- Staff 11:** Bass clef, key of B minor. It contains a sustained chord.
- Staff 12:** Bass clef, key of B minor. It contains a sustained chord.
- Staff 13:** Bass clef, key of B minor. It begins with a piano (*p*) dynamic and contains a melodic line with slurs.

This musical score is for a military band and consists of 14 staves. The notation is as follows:

- Staff 1:** Treble clef, key of D major (two sharps). It begins with a melodic line featuring eighth and sixteenth notes.
- Staff 2:** Treble clef, key of D major. Continues the melodic line from the first staff.
- Staff 3:** Treble clef, key of D major. Continues the melodic line.
- Staff 4:** Treble clef, key of D major. Continues the melodic line.
- Staff 5:** Treble clef, key of D major. Continues the melodic line.
- Staff 6:** Treble clef, key of D major. Continues the melodic line.
- Staff 7:** Treble clef, key of D major. Continues the melodic line.
- Staff 8:** Treble clef, key of D major. Continues the melodic line.
- Staff 9:** Treble clef, key of D major. Continues the melodic line.
- Staff 10:** Bass clef, key of B-flat major (two flats). It provides a harmonic accompaniment with chords.
- Staff 11:** Bass clef, key of B-flat major. Continues the harmonic accompaniment.
- Staff 12:** Bass clef, key of B-flat major. Continues the harmonic accompaniment.
- Staff 13:** Bass clef, key of B-flat major. Continues the harmonic accompaniment.
- Staff 14:** Bass clef, key of B-flat major. Continues the harmonic accompaniment.

Performance markings include:

- espress* (written twice on the fourth staff).
- solo* (written above the sixth staff).



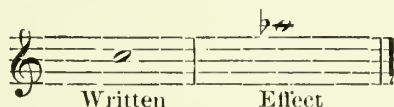
## CHAPTER LVII.

*The Full Military Band.*

Under this head is classed such bands as those of the Grenadier and Coldstream Guards of London, the Guard Republicaine of Paris, and the bands of the 7th Reg. (Cappa's), 9th Reg. (Arbuckle's), 13th Reg. (Dodworth's), and 22d Reg. (Gilmore's), of New York City. Bands of this class may include, in addition to the instruments mentioned in the previous chapter, Flutes, Oboes, A $\flat$  and F Clarionets, Alto and Bass Clarionets, Bassoons, Saxophones, Sarrusophones, Flugel Horns, French Horns, Timpani, Bells, etc. Slide Trombones are mostly used in place of Tenors; and F and C Tubas are often preferred to those in E $\flat$ —at least this is the case in New York. We will briefly notice such of the above instruments as have not heretofore been treated, and make such additional suggestions as may seem necessary regarding those which have already been noticed as orchestral instruments.

THE FLUTE commonly used in the Military Band is the so-called F Flute—that is, the D sounds F. The music is written in the same key as for the E $\flat$  Clarionet, and here the absurdity of the *usual way* of designating Flutes is very apparent—an F and an E $\flat$  instrument (both transposing) playing from the same part! As C on this Flute sounds E $\flat$ , the same as C on the E $\flat$  Clarionet, I propose to call it an E $\flat$  Flute. It may sometimes be desirable to write for the Concert Flute, in which case the part must be written in the key of the piece—the same as for the other non-transposing instruments. OBOES and Bassoons may be treated the same as in the Orchestra.

THE A $\flat$  CLARIONET (high) is a small instrument of acute pitch. Its tones are a *minor sixth* above the written note:—



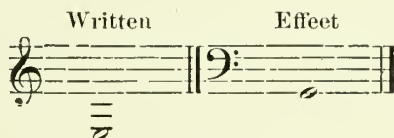
To sound in unison with the E $\flat$  Clarionet, the notes must be written thus:—



That is, if the E $\flat$  Clarionet part be written in C, the A $\flat$  must be in G below. The compass of this Clarionet is the same as the others. Its chief value is to give brilliancy to *forte* passages. It should be used with caution in *piano* passages. It is a very rare instrument in this country, Mr. Frommer, of Gilmore's Band, being the only performer on it to my knowledge.

THE F CLARIONET is not used in this country, the E $\flat$  instrument taking its place. It will often figure in German scores, therefore we will notice it here. It is a tone higher than the E $\flat$  Clarionet in pitch, its C sounding F. Its part is therefore written a *perfect fourth* below the real sounds.

THE ALTO CLARIONET IN E $\flat$  is of the same pitch as the E $\flat$  Alto Horn—standing an octave below the E $\flat$  Clarionet. The real sounds are a major sixth below the written note. Its compass and peculiarities are the same as the smaller Clarionets. It is effective for doubling the melody, and for sustained tones or harmony parts. The low notes are rich, and extend well into the Bass; its low E sounding G.



Examples 203 and 207 contain parts for the Alto Clarionet.

THE BASS CLARIONET IN B $\flat$  is an octave below the usual B $\flat$  Clarionet, and in unison with the Baritone. It has the same compass as other Clarionets. It is usually written for in the Treble clef, and as a transposing instrument. Its sounds are a major ninth below the written notes: (See Chapter XLI)



It may be treated in much the same manner as the Baritone, or Euphonium, and combines well with Saxophones. It furnishes an excellent bass for the smaller reed instruments. Bass Clarionets may be substituted for Bassoons, in which case they read from the Bass and Tenor clefs. See Ex. 203.

THE SAXOPHONE is a conical instrument of brass with keys arranged on the Boehm system, and played with a single reed and a Clarionet mouthpiece. These instruments have lately taken quite a prominent place in Military Bands. There are Saxophones in  $E\flat$  and  $B\flat$  of six different sizes; also some in C and F. The small  $E\flat$  *Soprano Saxophone* corresponds to the  $E\flat$  Cornet or Clarionet in pitch; the  $B\flat$  *Soprano* (Alto) is in unison with the  $B\flat$  Clarionet or Cornet, and may play from the same part when its compass is not exceeded; the  $E\flat$  *Alto* (Tenor) is of the same pitch as the  $E\flat$  Alto horn, or the Alto Clarionet, and is the favorite for solos; the  $B\flat$  *Tenor* (Baritone) has the same pitch as the Trombone, and may play from the same part when written in the Treble clef; the  $E\flat$  *Baritone* (Bass) standing an octave below the  $E\flat$  Alto, and the  $B\flat$  Bass a fourth lower than the  $E\flat$  Bass.

The small  $E\flat$  Soprano and the large  $B\flat$  Bass are not so much used as the others. Below is the compass with the *real sounds* of the different Saxophones:—

With the Chromatic intervals.

## 202.

HIGH SAXOPHONE IN  $E\flat$

Real Sounds:

SOPRANO SAXOPHONE  
in C or in  $B\flat$

Real Sounds in  $E\flat$ :

ALTO SAXOPHONE  
in F or in  $E\flat$

Real Sounds in  $F\flat$ :

TENOR SAXOPHONE  
in C or in  $B\flat$

Real Sounds in  $B\flat$ :

BARITONE SAXOPHONE  
in F or in  $E\flat$

Real Sounds in  $E\flat$ :

BASS SAXOPHONE  
in C or in  $B\flat$

Real Sounds in  $E\flat$ :

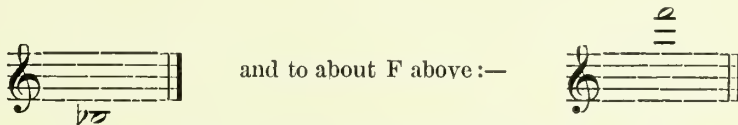


The following Shakes should be avoided :—



The high Saxophones have a rather more penetrating quality of tone than the Clarionet, with a slightly disagreeable nasal tinge which is scarcely noticeable when played in combination with other instruments. The lower instruments have something of the Cello quality of tone, and are especially fine for interpreting the string parts of orchestral compositions when arranged for Military Bands. Thus, the opening measures for the Cello, in the Overture to "William Tell," can be executed on Saxophones so as to closely resemble the original effect. A quartet of Saxophones ought to be included in every Military Band that makes a specialty of concert music. They not only introduce a new tone-color, but can be used instead of the harsher instruments when soft organ-like effects are wanted, and they add wonderfully to the *general effect* in passages for the full band.

THE SARRUSOPHONE is a brass instrument constructed on the same principle as the Saxophone, but played with a *double reed*, like the Oboe and Bassoon, to which it bears the same relation as the Saxophone does to the Clarionet. They are made in different sizes and keys corresponding precisely to Saxophones, and may play from the same part with them, as the Treble clef is used for all. Performers on the large instruments should, however, learn to play from the Bass and Tenor clefs, as they may be required to play Bassoon parts. Mr. Arbuckle has introduced Sarrusophones in his band in place of Oboes and Bassoons, and he informs me that they answer the purpose completely, at the same time adding greatly to the power and body of tone in the Reed department. The tone of the Sarrusophone is not unlike the Saxophone, but rather finer in quality. The compass is nearly the same, extending down to the B $\flat$  below the staff:—



Mr. Mundwiler, of Gilmore's Band, (to whose courtesy I am indebted), plays an E $\flat$  Contra Bass Sarrusophone which has the following compass :—



These extremely low notes (lacking only three notes of the lowest tone of the Contra Bassoon) speak very slowly, and are difficult to produce in perfect tune, or to sustain for any great length of time. An instrument in E $\flat$ , a *fourth lower* than the E $\flat$  in question, is said to have been added to the family of Sarrusophones. It must be an exceedingly unmanageable instrument, and of doubtful utility in this country, where it is not considered economical to employ a musician to count "bars rest" by the hundred, and only come out with a very low note now and then on state occasions. In general, the Sarrusophone may be treated precisely like the Saxophone, and being in the same keys and of the same pitch, what was said of the latter will also apply to the former instrument.

THE FLUGEL HORN belongs to the Bugle family. It has the same pitch, compass, and mechanism as the E $\flat$  Cornet, but has a larger bell, like the old E $\flat$  Bugle. Its tone is soft and round, and well adapted for harmony parts, or slow melodies of a tender character. Combined with Cornets, it softens their harshness and gives greater fullness to the body of tone. Sometimes the larger valved instruments are called Flugel Horns. See score, Ex. 234. No especial directions are necessary for writing for this instrument. It may be treated in much the same way as the Cornet. In consequence of its large bell, and a somewhat larger mouthpiece than is used with the Cornet, the extreme upper notes are not easy to produce.



THE FRENCH HORN when used in the Military Band is generally keyed in  $E\flat$ , but exceptions to this are numerous. See Ex. 204, where the Horns are in  $F$ . It is well to write the Horn parts so they can be played by Altos in case there are no Horns. Some combinations include both Horns and Altos, as in the example cited above, where the Althorn in  $F$  is used instead of the  $E\flat$  common with us. All solos requiring full, rich, sustained tones should be allotted to the Horn in preference to the Alto, while rapid and chromatic passages are more suitable for the latter instrument.

SLIDE TROMBONES in the full Military Band should not be treated like the  $E\flat$  Tenors in a Brass Band. They are to be held in reserve for the strong, sonorous chords, and for the heavy, crashing effects of the grand climax. It is not to be inferred from this that they are out of place in *piano* passages. On the contrary, most beautiful effects can be obtained from Trombones played *pianissimo*. In such cases it might be well to let the  $B\flat$  Tenors rest. What should be guarded against, is a mere duplication of the Tenor parts by the Trombones, thereby overweighting those parts. By inspecting the scores for full band, it will be seen that the Trombones are treated quite independently of the Tenors. They stand in the same relationship to each other as do the Horns and Altos. Tenors are capable of executing more difficult runs than the Trombones, (see Baryton part of Ex. 205), and they can be employed to good advantage in the general filling up of the harmony.

KETTLE DRUMS, sets of Bells, etc., are only useful in the Military Band for concert music, and are then treated precisely as they are in the stringed Orchestra. The student is referred to the chapters on those instruments for information regarding their use.

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## CHAPTER LVIII.

Having reviewed all the instruments employed at present in Military Bands, let us examine the different systems upon which these bands are organized. The more prominent of these systems, and the arrangement of music for which we will be most likely to meet with, are the English, German, and the French. The Belgian arrangement is practically the same as the French. The plan of organization, or combination of instruments most common in this country for bands of forty or fifty in number, is very nearly the same as in England. "Boose's Military Journal," the leading publication of its kind in England, and used extensively in this country, as well as in the British Army, publishes parts for the following instruments: Flute and Piccolo; Oboes, (or Clarionets in  $C$ ); 1st and 2nd  $E\flat$  Clarionets; 1st, 2nd and 3rd  $B\flat$  Clarionets; Alto Clarionet in  $E\flat$ ; 1st and 2nd Bassoons, (or Bass Clarionets in  $B\flat$ ); 1st and 2nd  $B\flat$  Cornets; 1st and 2nd  $E\flat$  Trumpets; 4 Horns in  $E\flat$ ; Althorn in  $B\flat$ , (in Treble clef); 1st and 2nd Trombones in Tenor clef; Bass Trombone; Euphonion; Bases; Snare and Bass Drums.

There are a few obstacles to the general use of this journal in this country which will be apparent from what follows. It will be noticed that the  $E\flat$  Cornet is omitted from the above list, but some English publications include a part for it, consisting mainly of *tutti* passages. The solo instruments are principally the  $1\flat$  Clarionet,  $B\flat$  Cornet, Horn, and Euphonion. Few of the parts can be omitted without damage to the effect. Probably those which could be best dispensed with are the 2nd  $E\flat$  Clarionet,  $E\flat$  Alto Clarionet, and in some cases, the Oboes and Bassoons. For use in this country, the Trombone in the Tenor clef will cause trouble for the amateur, as well as some of the professional performers. The  $E\flat$  Trumpets are very important, and here another difficulty presents itself. Trumpets being nearly unknown in our bands, the parts are played usually on  $1\flat$  Cornets by transposing a fourth higher. This is easily done by those accustomed to it, but to the uninitiated it is certain to prove a poser. The French Horn parts sometimes run pretty low, (4th Horn especially), but as a rule they can be played on Altos. A good Alto player ought to be able to take the low  $G$ , and where the Bass  $C$  appears, the octave above can be played if the low note cannot be fully brought out. We give here an extract from "Boose's Military Journal" which will illustrate the English mode of organizing Military Bands, and the manner of arranging music for them. The only alterations necessary to make the arrangement available for the majority of American bands, would be to write the Trumpet parts for  $B\flat$  Cornets, and change the Tenor Trombone parts from the Tenor to the Bass clef. Another part might be added for a second Althorn in  $B\flat$ , and the "American style" of arrangement would be complete.

## OVERTURE: "EMMA DI RESBURGO."

From "Boose's Military Journal."

MEYERBEER.

203

*Andante* Piccolo in E $\flat$ 

FLUTE AND PICCOLO ..

OBOES, OR  
CLARINETS IN CE $\flat$  CLARINETS, 1st & 2d1st CLARINET IN B $\flat$  ...2d & 3d CLARINETS  
IN B $\flat$ ALTO CLARINET IN E $\flat$ 1st & 2d BASSOONS OR  
BASS CLARINETS IN B $\flat$ 1st & 2nd B $\flat$  CORNETS1st & 2d E $\flat$  TRUMPETS1st & 2d HORNS IN E $\flat$ 3d & 4th HORNS IN E $\flat$ 1st & 2nd  
TENOR TROMBONES

BASS TROMBONE .....

ALTHORN IN B $\flat$  .....

EUPHONION .....

TUBAS .....

DRUMS .....

The musical score is written for a military band. It features a variety of woodwinds, brass, and percussion. The tempo is marked 'Andante'. The key signature is one flat (B-flat). The score begins with a forte (f) dynamic. The Piccolo part has a 'Solo 1' marking with triplet figures. Dynamics include forte (f), piano (p), and a crescendo leading to a final forte (f) at the end of the page.

Flute in F *8va*

This musical score is for a military band, featuring multiple staves. The key signature is B-flat major (two flats). The score includes the following parts:

- Flute in F *8va***: The top staff, starting with a treble clef and a key signature of two flats. It features a melodic line with triplets and a *p* (piano) dynamic marking.
- Woodwinds**: Several staves below the flute, including parts for Clarinet in B-flat, Bassoon, and Saxophone in B-flat. These parts often play sustained notes or simple rhythmic patterns.
- Brass**: Staves for Trumpet in B-flat, Trombone, and Euphonium/Tuba. These parts provide harmonic support and often play sustained notes.
- Percussion**: A snare drum part is visible, providing a steady rhythmic accompaniment.
- Other Instruments**: A part for a stringed instrument, possibly a guitar or a low brass instrument like a tuba, is also present.

The score is written in a standard musical notation style, with various clefs, key signatures, and dynamic markings. The *8va* marking indicates that the flute part is an octave higher than written. The *p* marking indicates a piano dynamic. The *1st* marking indicates a first ending or a first part of a section.



A page of musical notation for a string quartet, featuring 12 staves. The notation includes various musical symbols such as notes, rests, and dynamic markings like 'p' and 'Stringendo un poco'. The page is numbered '12' in the top right corner. The notation is arranged in a standard four-staff format, with each staff representing a different instrument. The music is written in a key with three flats (B-flat, E-flat, A-flat) and a common time signature. The notation includes various musical symbols such as notes, rests, and dynamic markings like 'p' and 'Stringendo un poco'. The page is numbered '12' in the top right corner.

Piccolo

The musical score is arranged in 15 staves. The key signature is B-flat major (two flats). The time signature is 4/4. The score includes a Piccolo part in the first staff. The second staff has a piano (*p*) dynamic. The third staff has a forte (*f*) dynamic. The fourth staff has a piano (*p*) dynamic. The fifth staff has a piano (*p*) dynamic. The sixth staff has a piano (*p*) dynamic. The seventh staff has a piano (*p*) dynamic. The eighth staff has a piano (*p*) dynamic. The ninth staff has a piano (*p*) dynamic. The tenth staff has a piano (*p*) dynamic. The eleventh staff has a piano (*p*) dynamic. The twelfth staff has a piano (*p*) dynamic. The thirteenth staff has a piano (*p*) dynamic. The fourteenth staff has a piano (*p*) dynamic. The fifteenth staff has a piano (*p*) dynamic.

This musical score is for a military band and consists of 15 staves. The notation is as follows:

- Staff 1:** Treble clef, key of B-flat major (two flats). It contains a complex melodic line with many beamed sixteenth and thirty-second notes.
- Staff 2:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 3:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 4:** Treble clef, key of B-flat major. It contains a complex melodic line with many beamed sixteenth and thirty-second notes.
- Staff 5:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 6:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 7:** Bass clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 8:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 9:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 10:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 11:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 12:** Treble clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 13:** Bass clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 14:** Bass clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.
- Staff 15:** Bass clef, key of B-flat major. It contains a harmonic accompaniment with chords and some moving lines.

The score includes dynamic markings, specifically a *p* (piano) marking appearing on Staff 12 and Staff 13. The notation is dense, particularly in the first and fourth staves, which feature rapid sixteenth-note passages.



This page contains musical notation for a military band, consisting of 15 staves. The notation is written in a key signature of three flats (B-flat, E-flat, A-flat) and a common time signature (C). The staves are arranged in a system, with some staves grouped by a brace on the left. The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics *p* (piano) and *f* (forte) are used throughout the piece. The notation is written in a style typical of early 20th-century musical scores.

The staves are numbered 1 through 15. The notation is written in a key signature of three flats (B-flat, E-flat, A-flat) and a common time signature (C). The staves are arranged in a system, with some staves grouped by a brace on the left. The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics *p* (piano) and *f* (forte) are used throughout the piece. The notation is written in a style typical of early 20th-century musical scores.

This musical score is for a military band and consists of 15 staves. The notation is as follows:

- Staff 1:** Treble clef, key of B-flat major (two flats). It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 2:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 3:** Treble clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 4:** Treble clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 5:** Treble clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 6:** Treble clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 7:** Bass clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 8:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 9:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 10:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 11:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 12:** Bass clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 13:** Treble clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.
- Staff 14:** Bass clef, key of B-flat major. It contains a complex rhythmic pattern of eighth and sixteenth notes, starting with a forte (f) dynamic and an accent (>).
- Staff 15:** Bass clef, key of B-flat major. It contains a whole rest followed by a half note G4 with an accent (>) and a forte (f) dynamic.

Throughout the score, various dynamics are indicated: *f* (forte), *p* (piano), and *fz* (forzando). Accents (>) are used to emphasize specific notes. The key signature remains B-flat major throughout the piece.





FLÜGELHORN IN B I U II

ALTHORN IN F I U II

BASSFLÜGELHORN IN B I U II

EUPHONION .....

BASSE U. CONTRAFAGOTT

TROMPETE IN F I U II

TROMPETE IN F III U IV

POSAUNE - I U II.....

POSAUNE-III.....

KEINE TROMMEL ....

GROSSE TROMMEL ....

*ff* *p* *ff* *p* *ff* *p* *ff* *ff* *ff* *ff* *p*



This page of musical notation is a piano accompaniment for a piece. It consists of ten staves of music. The notation is complex, featuring many chords and melodic lines. The first staff has a treble clef and a key signature of one sharp (F#). The second staff has a treble clef and a key signature of one sharp (F#). The third staff has a treble clef and a key signature of one sharp (F#). The fourth staff has a treble clef and a key signature of one sharp (F#). The fifth staff has a treble clef and a key signature of one sharp (F#). The sixth staff has a treble clef and a key signature of one sharp (F#). The seventh staff has a treble clef and a key signature of one sharp (F#). The eighth staff has a treble clef and a key signature of one sharp (F#). The ninth staff has a treble clef and a key signature of one sharp (F#). The tenth staff has a treble clef and a key signature of one sharp (F#). The notation includes various musical symbols such as notes, rests, and dynamic markings like 'mf' and 'A'. The piece is in 4/4 time. The title 'Ohne Becken' is written at the bottom right of the page.



This musical score is for a military band, featuring multiple staves with various musical notations, dynamics, and articulations. The score is written in a key with one flat (B-flat) and a 2/4 time signature. The notation includes treble and bass clefs, key signatures, time signatures, and various musical symbols such as notes, rests, beams, and slurs. Dynamics include *ff* (fortissimo), *p* (piano), and *ffz* (fortissimo z). Articulations include accents (*acc.*) and slurs. The score is divided into sections by wavy lines, with some sections marked *Marcato*. The notation is dense, with many notes and rests, and includes various musical symbols such as *ff*, *p*, *ffz*, *acc.*, and *Marcato*.

Musical score for Military Band instrumentation, page 251. The score consists of 11 staves. The first four staves are for woodwinds (flutes, oboes, clarinets, and bassoons). The next four staves are for brass (trumpets, cornets, trombones, and euphoniums). The final three staves are for percussion (snare drum, cymbals, and bass drum). The score includes various musical notations such as notes, rests, and dynamic markings like *ff* (fortissimo) and *p* (piano). A "3rd Solo" marking is present on the fifth staff. The piece concludes with a "Mit Becken" (With Cymbal) instruction.

This musical score is arranged in 12 systems, each containing two staves. The notation includes various musical symbols such as notes, rests, beams, and slurs. Dynamics like *p* (piano) and *f* (forte) are indicated throughout. Performance instructions such as *Solo* and *Unison* are placed above specific staves. The score is written in a key with one flat (B-flat) and a common time signature. The notation is dense, with many beamed notes and slurs, suggesting a fast or rhythmic piece. The bottom staff of each system often features a more complex rhythmic pattern, possibly for a bass drum or snare drum part.



This page contains a musical score for a military band, featuring ten staves of music. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is written in a key signature of one flat (B-flat) and a 2/4 time signature. The instruments represented by the staves are: 1. Flute (1st staff), 2. Clarinet (2nd staff), 3. Bassoon (3rd staff), 4. Alto Saxophone (4th staff), 5. Tenor Saxophone (5th staff), 6. Baritone Saxophone (6th staff), 7. Euphonium (7th staff), 8. Trombone (8th staff), 9. Tuba (9th staff), and 10. Snare Drum (10th staff). The score includes dynamic markings such as *p* (piano) and *3d Solo* (third solo). The music is arranged in a way that allows for a full band sound, with each instrument having its own part to play. The notation is clear and legible, with a focus on the melodic and harmonic lines of the instruments.



This musical score is for a military band and consists of ten staves. The notation is as follows:

- Staff 1:** Treble clef, key of B-flat major (two flats). It contains a melodic line with eighth and sixteenth notes, starting with a *p* (piano) dynamic marking.
- Staff 2:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes.
- Staff 3:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes.
- Staff 4:** Bass clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 5:** Bass clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 6:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 7:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 8:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 9:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.
- Staff 10:** Treble clef, key of B-flat major. It contains a melodic line with eighth and sixteenth notes, starting with a *p* dynamic marking.

The score includes various musical notations such as notes, rests, and dynamic markings (*p* for piano). The key signature is B-flat major, and the time signature is 4/4.





This image shows a page from a musical score, likely for a symphony. It contains 18 staves of music. The notation is complex, featuring various note values, rests, and dynamic markings. The key signature has one flat (B-flat), and the time signature is 4/4. The score is written for a large ensemble, with multiple parts for each instrument. The dynamics range from piano (p) to fortissimo (ff). There are also markings for 'Sans Cimb.' (without cymbals) and 'Avec Cimb.' (with cymbals). The page is numbered '8va' at the top left. The music is in a major key, with a key signature of one flat (B-flat). The notation includes many slurs, ties, and accents, indicating a highly technical and expressive piece. The overall style is that of a classical symphony score, with a focus on intricate melodic and harmonic development.



This image shows a page of musical notation, likely a score for a piano concerto. The notation is arranged in multiple systems, each containing several staves. The music is written in a key with one sharp (F#) and a common time signature. The notation includes various rhythmic values, including sixteenth and thirty-second notes, as well as rests. Dynamic markings such as 'ff' (fortissimo) and 'Unis.' (unison) are present. Performance instructions like '8va' (octave), 'loco.' (loco), and 'Cadenza.' are also included. The page is numbered '1' in the bottom right corner.



206.

GDE. FLUTE.

PTE.  
CLARINETTE  
en Mi♭

CLARINETTES  
en Sib

HAUTBOIS.

(SOPR. en Sib)

ALTO  
en Mi♭

TEN. en l't.

BARYTON  
en Mi♭

BASS en Sib

CORNET A  
Pistons en Ut.

SAXHORN  
CONTRALTOS  
en Si $\flat$

PETIT SAX-  
HORN en Mi

SAXOTROMBAS  
en Mib

CORS en Mib

TRUMPETTES  
à Cylindres  
en Mi $\flat$

SANHORNS  
BARYTONS  
en Sib

TROMBONES

SAXHORN  
BASSE en Sib

SAXHORN C  
LASSE en Mib

SAXHORN C  
BASSE en Sib

TIMB. en Ut. Sol.  
TAMBOUR et  
Gsse. Caisse.

Arr. par J. MOHR.

*Minuetto maestoso.*

8va

8va.

8v<sup>a</sup>*ff*

\_\_\_\_\_

1

1990	1991
1992	1993
1994	1995
1996	1997
1998	1999
2000	2001
2002	2003
2004	2005
2006	2007
2008	2009
2010	2011
2012	2013
2014	2015
2016	2017
2018	2019
2020	2021
2022	2023
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2096	2097
2098	2099
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1

 $ff$ 

三

—

•

•

ff

*U*

---

—E3—

—

三三

33

7







8va.

8va.

*mf e legg.*

*mf e legg.*

*mf e legg.*

*p* *mf*

*p* *mf*

*p* *mf*



This page contains musical notation for a military band, organized into 18 staves. The notation is as follows:

- Staff 1:** Treble clef, key signature of one sharp (F#).
- Staff 2:** Treble clef, key signature of one flat (Bb).
- Staff 3:** Treble clef, key signature of one flat (Bb).
- Staff 4:** Treble clef, key signature of one flat (Bb), containing musical notation.
- Staff 5:** Treble clef, key signature of one flat (Bb), containing musical notation.
- Staff 6:** Treble clef, key signature of one flat (Bb), containing musical notation.
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- Staff 10:** Treble clef, key signature of one flat (Bb), containing musical notation.
- Staff 11:** Treble clef, key signature of one flat (Bb).
- Staff 12:** Treble clef, key signature of one flat (Bb).
- Staff 13:** Treble clef, key signature of one flat (Bb).
- Staff 14:** Treble clef, key signature of one flat (Bb).
- Staff 15:** Treble clef, key signature of one flat (Bb).
- Staff 16:** Bass clef, key signature of one flat (Bb).
- Staff 17:** Bass clef, key signature of one flat (Bb), containing musical notation.
- Staff 18:** Bass clef, key signature of one flat (Bb), containing musical notation.

*pp*

*Solo.*

*Solo.*

*Solo.*

*pp*

*1st Solo.*

*pp*

*pp*

Military bands in this country are not yet established on a very sure footing, and as long as this is the case, there will be no uniform plan of organization. With us, change is the order of the day. A striking contrast is seen in England, where Mr. Charles Godfrey served as band master in the Coldstream Guards for nearly fifty years, and his eldest son Daniel, has been band master of the Grenadier Guards since 1856! In Europe, Military Bands are supported by Government, while here they are systematically ignored. Even the band at the Military Academy is scarcely tolerated by our virtuous and economical Congress. *Millions for creeks and mud-puddles—not one cent for music!*

Probably the most complete Military Band ever organized in this country was that engaged at the Centennial Exposition under the direction of Mr. P. S. Gilmore, and which afterwards made a tour in Europe. The band at the Exposition comprised the following combination of instruments: two Piccolos, two Flutes, two Oboes, one A $\flat$  Clarinet (high), two E $\flat$  Clarionets, eighteen B $\flat$  Clarionets, one Alto Clarinet, one Bass Clarinet, four Bassoons, five Saxophones, one E $\flat$  Cornet, four E $\flat$  Cornets, two Flugelhorn, two Trumpets, four Horns, two B $\flat$  Tenors, four Trombones, two Euphoniums, four Tubas, Drums, Cymbals, Bells, etc.; total, 65. It would hardly be possible to form a band with a greater variety of instruments. Nearly every wind instrument of any value in use at the present day is included in the above enumeration. The effects of color and contrast which can be produced with such a combination are endless. By dividing the instruments into groups, or families, it will be seen that they are so many complete bands in themselves. Each can produce complete harmony without aid from the others. The Flutes and double-reeds may be set off against the single-reeds, or the Flutes and single-reeds against the double-reeds. The reeds may be contrasted with the Trumpets and Horns or Trombones, and the Saxophones with either reed or brass. The Flugelhorn blend very well with the peculiar tone of the Saxophones, and by the combination seem to form a new tone-color. Then, by the mixture in various ways of these different groups, a great variety of effects are constantly presenting themselves. There are, however, some disadvantages to be met with in bands of this description. One great difficulty is that but few publications of Military Band music have parts for all the instruments. Some may lack Flugelhorn and Saxophone, others Alto and Bass Clarinet, or Bassoon parts. These missing parts have to be "vamped up" from the others, and, in consequence, the effect intended by the original arranger is often ruined. Even the score No. 206, notwithstanding its huge proportions, has no parts for the Alto and Bass Clarionets, or the Bassoons. Bands of this sort should have the music arranged expressly for them, in order to display all their resources to the best advantage. But here another serious difficulty arises. The cost of scoring and copying parts for such an organization is an item of considerable magnitude, and for which the Government makes no appropriation. In concluding this part of our work, we venture the opinion that any attempt to lay down rules for arranging music for these large bands would result in failure, and would be simply ridiculous; for only those who are accustomed to the sound of the instruments singly, as well as in combination, and who know the capacity of each for execution, are competent to write for them. It is quite as difficult to score well for a full Military Band as for the Grand Orchestra, and some find it even more so. Facility can only be gained by long experience and practice. Therefore, I hope no one will run away with the idea that he has only to study this book (or any other for that matter) to become a master of instrumentation. *Without natural gifts*, all that has ever been written on the subject will be of no avail. Books are but guide-posts to point out the proper road—we must accomplish the journey by our own efforts. We give for our final example, the commencement of Beethoven's Overture "Fidelio," as arranged for Gilmore's Band. Its simplicity will enable the student to understand the working of each instrument and its relation to the others.



## OVERTURE: "FIDELIO."

BEETHOVEN.

207.

FLUTE and  
PICCOLO.

OBOE.

A♭ CLARINET.  
(High.)

E♭ CLARINET

1

B♭ CLARINET

2

3

E♭ ALTO CLAR'T

B♭ BASS CLAR'T

BASSOONS.

B♭ SOPRANO

E♭ ALTO

B♭ TENOR

E♭ BARIT'NE

B♭ BASS

E♭ CORNET.

E♭ CORNETS.

B♭ Flügelhorn

E♭ TRUMPETS.

1

2

E♭ HORNS.

3

4

B♭ TENORS.

1

TROMBONES

2

3

EUPHONIUM.

BASSES.

TIMPANI E♭, B♭

*Allegro.**Adagio.*

SAXOPHONES, or SARRUSOPHONES.

The musical score is written for a military band. It begins with a tempo marking of *Allegro* and a key signature of one flat (B♭). The score is divided into two main sections: the first section is marked *Allegro* and the second section is marked *Adagio*. The instruments are listed on the left side of the page, and their corresponding staves are shown on the right. The score includes various dynamic markings such as *f* (forte), *sf* (sforzando), and *p dol.* (piano dolce). The score also includes a section for 2 1st Clts. (2 1st Clarinets) and a section for 8va. (8va. ....). The score is written in a standard musical notation with a common time signature (C) and a key signature of one flat (B♭).





This image shows a page of musical notation, likely a score for a piano piece. The notation is arranged in multiple staves. The top staff is a treble clef with a key signature of one flat (B-flat). The second staff is a bass clef with a key signature of one flat (B-flat). The third staff is a treble clef with a key signature of one flat (B-flat). The fourth staff is a bass clef with a key signature of one flat (B-flat). The fifth staff is a treble clef with a key signature of one flat (B-flat). The sixth staff is a bass clef with a key signature of one flat (B-flat). The seventh staff is a treble clef with a key signature of one flat (B-flat). The eighth staff is a bass clef with a key signature of one flat (B-flat). The ninth staff is a treble clef with a key signature of one flat (B-flat). The tenth staff is a bass clef with a key signature of one flat (B-flat). The eleventh staff is a treble clef with a key signature of one flat (B-flat). The twelfth staff is a bass clef with a key signature of one flat (B-flat). The thirteenth staff is a treble clef with a key signature of one flat (B-flat). The fourteenth staff is a bass clef with a key signature of one flat (B-flat). The fifteenth staff is a treble clef with a key signature of one flat (B-flat). The sixteenth staff is a bass clef with a key signature of one flat (B-flat). The seventeenth staff is a treble clef with a key signature of one flat (B-flat). The eighteenth staff is a bass clef with a key signature of one flat (B-flat). The nineteenth staff is a treble clef with a key signature of one flat (B-flat). The twentieth staff is a bass clef with a key signature of one flat (B-flat). The notation includes various musical symbols such as notes, rests, and dynamic markings like 'pp', 'Cres.', and 'p Cres.'. The page is numbered '2' in the bottom left corner.



Flutes in C.  
8va

This musical score is for Flutes in C, 8va. It consists of 18 staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics *p* Cres. and *ff* are used throughout. The score is written in a key signature of one flat (B-flat) and a common time signature (C). The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics *p* Cres. and *ff* are used throughout. The score is written in a key signature of one flat (B-flat) and a common time signature (C). The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics *p* Cres. and *ff* are used throughout. The score is written in a key signature of one flat (B-flat) and a common time signature (C).

# APPENDIX.

# AN ODD CHAPTER

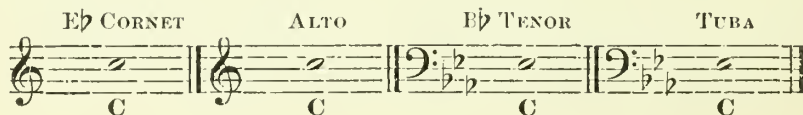
(NOT TO BE CONSIDERED AS PART OF THIS BOOK.)

*A Plan for Arranging Music for Brass and Reed Bands, in One Lesson;  
for the use of Amateurs only.*

---

The prevailing desire of our native musicians, whether in learning an instrument or in the study of the theory of music, is to accomplish their object *at once*, and with as little trouble and expense as possible. It is useless to remind them that even the great musicians, who are gifted by nature, must devote years of study and practice to their art. But our ambitious amateur is impatient to compose and arrange without taking the trouble to learn the *rudiments of music*. He would, *somehow*, arrive at the summit without the labor of climbing. Now, wading in unknown waters is dangerous for those who know not how to swim. In music, as in other affairs of this world, it is best to have *some* foundation to stand upon if we would not, sooner or later, come to grief. However, knowing that every musician would like to arrange music for a band, I will endeavor to show a *short cut*, whereby any one who can read a piano copy, may arrange music *without really knowing how they do it*. By this plan no brains are necessary; only follow the directions, and *don't stop to think*, for this chapter is written expressly for those who don't like to take that trouble. But should you, in an unguarded moment, ask yourself "why is this thus?" don't, I beg of you, peruse this chapter further, for the germ of a desire for knowledge *has sprouted*. Encourage it. Turn back to Chapter I and go through systematically, "if it takes you all summer." You will never regret it—at any rate so long as musicians receive the present munificent compensation for their labors!

To begin with, we have, in the Brass Band, instruments in two keys only— $E\flat$  and  $B\flat$ . That's easy to remember. Cornets, Altos, and Tubas in  $E\flat$ ; and Cornets, Tenors, Baritones, and Basses in  $B\flat$ . We shall, however, in this chapter, treat all the instruments, except the  $B\flat$  Cornets, as standing in  $E\flat$ . And, notwithstanding we shall use the Bass clef and the necessary flats at the signature for those instruments which usually play from that clef, the learner need not trouble himself with thinking about them after they are once written down, but take it for granted that the Treble clef stands there instead, with the same signature as the  $E\flat$  Cornets and Altos. According to this arrangement a note standing on the third space, for instance, would be called C for all the instruments, thus:





The notes of the following chord would be distributed and named as follows :

CHORD   Eb CORNET   3d ALTO   2d ALTO   1st ALTO   TENORS   TUBA

F   A   C   Eb   F-A or F-C   F

It will be seen from the above, that if we ignore the Bass clef, the notes for the Treble and Bass instruments may be called the same. The Tenors must be written *an octave* above the Altos to give the *same sound*. The compass of the different instruments may be found under their respective names in Part III. There are some notes for the Bass instruments which have accidentals that do not correspond with those in the Treble clef. Thus, the following notes for the Eb Cornet :

would require to be written for the Tuba or Tenors, thus :

The following *unison* passage will show how to apply the rule, and may be referred to in case of doubt :

Eb CORNET

Bb CORNET  
Sounds the same as Eb Cornet

Eb ALTO...  
Sounds an octave below Eb Cornet

TENORS  
OR BARITONE  
Sounds an octave below Eb Cornet

TUBA.....  
Sounds two octaves below Eb Cornet

We will take the following simple melody and treat it according to the above plan :

Andante

PIANO.....

The E♭ Cornet will take the upper part in the same key as above, and the B♭ Cornet the part next under the E♭. It must be written a fourth above the E♭ Cornet; that is, the F's in the first bar must be written B♭'s for the E♭ Cornet, as will be seen in the score below. The proper signatures for the different instruments may be found by referring to Ex. 196.

The musical score is arranged in six staves, each with a label to its left. The staves are: E♭ CORNETS, B♭ CORNETS, E♭ ALTOS, B♭ TENORS, BARITONE, and TUBA. The key signature is two flats (B♭ and E♭), and the time signature is 2/4. The notation includes various musical symbols such as notes, rests, and bar lines. The E♭ CORNETS part is written in treble clef, while the others are in bass clef. The TUBA part has a double bar line in the fourth measure, indicating a change in the instrument's role or a section break.

In the first measure we will say the Bass has F, the Baritone F, the Tenors F and A, the Altos F and C, and the E♭ Cornet F. By counting down a fourth, we find the original notes of the B♭ Cornets to be F and A. In the third measure the Bass has F, the Baritone D (the same as the E♭ Cornet), the Tenors F and G♯, the Altos F and B♭. These notes will be found to correspond exactly with the Piano sketch, the left-hand part of which must, of course, be read in the Bass clef. The 2d B♭ Cornet part, however, does not appear there as it does in the score, having been added afterward.

Should the learner be ambitious to write for Reed Bands, he has only to treat the E♭ Clarionet the same as the E♭ Cornet, and the B♭ Clarionet like the F♯ Cornet, only remembering that Clarionets can play higher and lower than Cornets when occasion requires. The Piccolo part is written one note higher than the E♭ Clarionet; that is, if the E♭ Clarionet part is in C, the Piccolo part must be written in D. See Ex. 196.

The foregoing is probably sufficient to explain a system (or rather the lack of a system) by which we can arrange music for Brass or Reed Bands. Any one who has a fair knowledge of the construction and progression of chords, should, with a little practice become expert in making arrangements on the above plan. Of course the doubling of improper intervals, and a consecutive fifth now and then, need not cause uneasiness. Very few people, comparatively, can detect them, and the chances are, that if the arranger, who is supposed to be a *musician*, cannot hear them, there is nothing to fear from the long-eared multitude who know little or nothing of music.

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